SCIENTIFIC REFERENCE BR
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PAKI 2 of 2

Access DB# 182026

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 03-8-2006
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/522,036
Mail Box and Bldg/Room Location: 9060 Results Format Preferred (circle): PAPER DISK E-MAIL
(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Pat. Lee. Bib.

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for a polymer of cl. #1 which contains either or both of the repeating unit (a1) of the Formula (I) and the repeating unit (a2) of the Formula (III)

(method for making such polymer is explained in cl. # 10)

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Ush	NA Sequence (#)	STN 256.00
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) 3	Questel/Orbit
Date Searcher Picked Up: 3/13/06	Bibliographic	Dr.Link
Date Completed: 3/14/06	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 60	Fulltext	Sequence Systems
Clerical Prep Time: 30	Patent Family	WWW/Internet
Online Time: 120	Other	Other (specify)

PTO-1590 (8-01)

Access DB# 182025

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 3-8-06
Art Unit: 1752 Phone Number 30 2-1333 Serial Number: 10/522,036
Mail Box and Bldg/Room Location: 9D60 (Rem.) Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: P/2. Lee B:6

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

of cl. #2.

Please search for a polymer which contains either or both of the repeating unit (a'1) of Formula (IV) and the repeating unit (a'2) of Formula (V) (method for making such polymer is explained in cl. # 11)

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
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Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#) 3	Questel/Orbit
Date Searcher Picked Up: 3/13/06	Bibliographic	Dr.Link
Date Completed: 3/14/06	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 60	Fulltext	Sequence Systems
Clerical Prep Time: 30	Patent Family	WWW/Internet
Online Time: 120	Other	Other (specify)

PTO-1590 (8-01)

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=> d his


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                 SEL RN

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L2            11 S E1-E11

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L3               STR
L4               STR

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L6             1 S L3 AND L4 AND L5

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L35            5 S L34 AND L2
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L39           50 S L36 AND L5
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L63          37 S L58 OR L62
L64           2 S L2 AND L63
L65           3 S L2 AND L61
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     FILE 'HCAPLUS' ENTERED AT 15:48:59 ON 13 MAR 2006
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L67           8 S L61


=> d que l67
L5              SCR 2043
L15             STR

Ak~Cb~Ak        Ak~O~Ak        Ak~O~Ak~O~Ak        CH2=CH~O
@8  9  10       @11 12  13     @14 15  16  17  18  1    2   3


G1 4      O~~CH=CH2
          5   6   7


VAR G1=AK/CB/8/11/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  18

STEREO ATTRIBUTES: NONE
L28             STR
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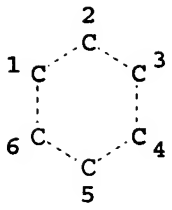
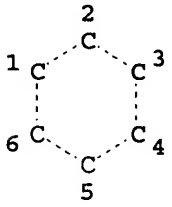


CH2═C OH 9
7 8

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L29 STR



NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

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L47	1406	SEA	FILE=REGISTRY ABB=ON PLU=ON 106-44-5/CRN
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FILE 'HCAPLUS' ENTERED AT 15:51:53 ON 13 MAR 2006

=> d l67 1-8 ibib abs hitstr hitind

L67 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:237967 HCAPLUS
DOCUMENT NUMBER: 142:325916
TITLE: Composition for antireflection film and resist pattern formation
INVENTOR(S): Nakayama, Kazuhiko
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070154	A2	20050317	JP 2003-209378	2003 0828
PRIORITY APPLN. INFO.:			JP 2003-209378	2003 0828

AB The composition, for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compound generating an acid by irradiation, (C) a light absorbing agent, and (D) an organic solvent, in which the composition crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The resist pattern is manufactured by the steps of (1) coating the composition on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aqueous alkaline solution Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.

IT **803688-36-0P**, Cyclohexanedimethanol divinyl ether-formaldehyde-m-cresol copolymer
(antireflection film for pos. photoresist pattern formation)
RN 803688-36-0 HCAPLUS
CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

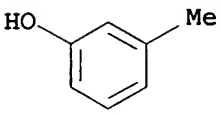
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1— CH_2— O— CH═ CH_2]

CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

CRN 50-00-0
CMF C H2 O

H_2C═O

IC ICM G03F007-11
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **803688-36-0P**, Cyclohexanedimethanol divinyl ether-formaldehyde-m-cresol copolymer 803688-39-3P, Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer
(antireflection film for pos. photoresist pattern formation)

L67 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:235470 HCAPLUS
DOCUMENT NUMBER: 142:325909
TITLE: Lift-off resist material and formation of resist pattern with controlled width of under layer
INVENTOR(S): Nakayama, Kazuhiko; Harada, Hisanori; Takagi, Isamu
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070153	A2	20050317	JP 2003-209377	2003 0828
PRIORITY APPLN. INFO.:			JP 2003-209377	2003 0828

AB The lift-off resist material, comprising (A) a resin, (B) a compound generating an acid by irradiation, and (C) an organic solvent, crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The lift-off resist pattern is manufactured by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chemical amplification-type pos. resist composition and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aqueous alkaline solution for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT **803688-35-9P**, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde-salicylaldehyde copolymer
(lift-off resist material with under layer containing alkali-soluble resin and acid generator)

RN 803688-35-9 HCAPLUS

CN Benzaldehyde, 2-hydroxy-, polymer with bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

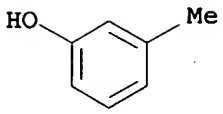
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

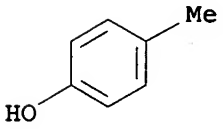
CM 2

CRN 108-39-4
CMF C7 H8 O



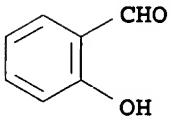
CM 3

CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 90-02-8
CMF C7 H6 O2



CM 5

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

IC ICM G03F007-26
ICS C08F008-00; C08G008-30; G03F007-039; G03F007-38; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **803688-35-9P**, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde-salicylaldehyde copolymer
803688-38-2P, Cyclohexanedimethanol divinyl ether-hydroxystyrene-styrene copolymer
(lift-off resist material with under layer containing alkali-soluble resin and acid generator)

L67 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:33917 HCAPLUS
DOCUMENT NUMBER: 142:144067
TITLE: Positive photoresist compositions and method

for forming resist patterns for system LCD with excellent lineality, resolution, and heat resistance

INVENTOR(S): Kurihara, Masaki; Hidesaka, Shinichi; Shinkura, Satoshi

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010215	A2	20050113	JP 2003-171029	2003 0616

PRIORITY APPLN. INFO.: JP 2003-171029 2003 0616

OTHER SOURCE(S): MARPAT 142:144067

AB The compns. contain alkali-soluble polymers or alkali-insol. polymers which become alkali-soluble by acids, wherein the polymers are purified using ion-exchange resins before composition preparation The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤2.0 μm and those of >2.0 μm, post-exposure baking them, and developing them in alkaline solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT **823790-46-1P**, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde copolymer
(novolak; pos. photoresists containing purified alkali-soluble polymers and quinonediazide esters for system LCD manufacture)

RN 823790-46-1 HCAPLUS

CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

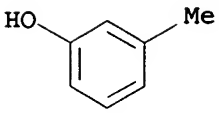
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1−CH2−O−CH=CH2]

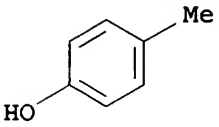
CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 50-00-0
CMF C H2 O

IC ICM G03F007-022
ICS G03F007-039; G03F007-26; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **823790-46-1P**, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde copolymer
(novolak; pos. photoresists containing purified alkali-soluble polymers and quinonediazide esters for system LCD manufacture)

L67 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:33915 HCAPLUS
DOCUMENT NUMBER: 142:103184
TITLE: Chemically amplified positive photoresist compositions and method for forming resist patterns for system LCD with excellent heat resistance and sensitivity
INVENTOR(S): Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi, Masaru; Harada, Hisanobu
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010213	A2	20050113	JP 2003-171027	2003 0616

PRIORITY APPLN. INFO.: JP 2003-171027 2003 0616

OTHER SOURCE(S): MARPAT 142:103184

AB The compns. with acid content ≤50 ppm contain alkali-soluble polymers, compds. H2C:CHOR1OCH:CH2 [R1 = (un)substituted C1-10 alkylene, R4mQR4m; R4 = (un)substituted C1-10 alkylene; m = 0, 1], photoacid generators, and organic solvents. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤2.0 μm and those of >2.0 μm, post-exposure baking them, and developing them in alkaline solns., thus giving resist patterns for IC and those for LCD units simultaneously.

IT **808750-79-0P**
(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

RN 808750-79-0 HCAPLUS

CN Benzaldehyde, 2-hydroxy-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

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CRN 17351-75-6
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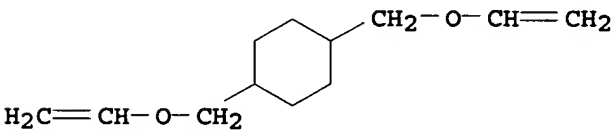

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CRN 108-39-4
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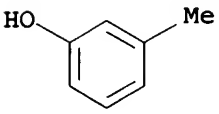

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CRN 106-44-5
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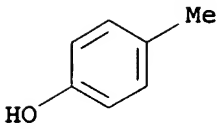

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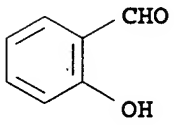
CRN 90-02-8
CMF C7 H6 O2



CM 5

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

IC ICM G03F007-039
ICS G03F007-004; G03F007-027; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **808750-79-0P** 819800-41-4P
(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)

L67 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1076933 HCAPLUS
DOCUMENT NUMBER: 142:65298
TITLE: Chemically amplified positive photoresists for system LCD and their patterning
INVENTOR(S): Hidesaka, Shinichi; Kurihara, Masaki; Nakagawa, Yusuke; Tate, Toshiaki
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2004354609	A2	20041216	JP 2003-151083	2003 0528

PRIORITY APPLN. INFO.: JP 2003-151083 2003 0528

AB The photoresists comprise (A) alkali-insol. novolaks prepared from alkali-soluble novolaks and R1(OCH:CH2)2 [R1 = C1-10 alkylene, R4mQR4m (R4 = C1-10 alkylene; m = 0, 1; Q = cyclohexylene)] and increasing solubility in aqueous alkali solns. by acid action, (C) radiation-sensitive acid generators, and (D) organic solvents. The photoresists are applied on substrates, prebaked, exposed through masks containing ≤2.0-μm and >2.0-μm-resolution patterns, baked, and developed to form IC patterns and patterns for LCD, simultaneously.

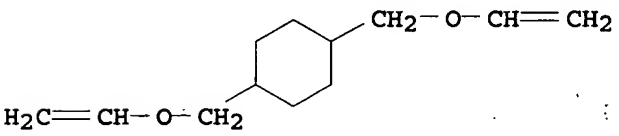
IT **808750-78-9P**, 1,4-Bis(vinyloxymethyl)cyclohexane-m-cresol-formaldehyde copolymer **808750-79-0P**
(chemical amplified pos. photoresists containing vinyloxymethyl ether-bridged novolaks for system LCD)

RN 808750-78-9 HCAPLUS

CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

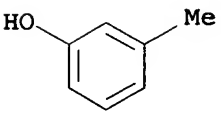
CM 1

CRN 17351-75-6
CMF C12 H20 O2



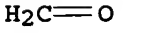
CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

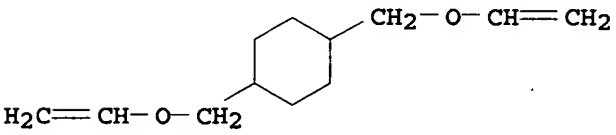
CRN 50-00-0
CMF C H2 O



RN 808750-79-0 HCAPLUS
CN Benzaldehyde, 2-hydroxy-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

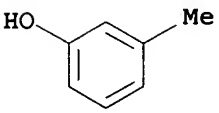
CM 1

CRN 17351-75-6
CMF C12 H20 O2



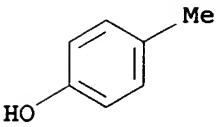
CM 2

CRN 108-39-4
CMF C7 H8 O



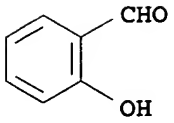
CM 3

CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 90-02-8
CMF C7 H6 O2



CM 5

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

IC ICM G03F007-039
ICS C08G008-30; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT **808750-78-9P**, 1,4-Bis(vinyloxymethyl)cyclohexane-m-cresol-formaldehyde copolymer **808750-79-0P**
(chemical amplified pos. photoresists containing vinyloxymethyl ether-bridged novolaks for system LCD)

L67 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1037374 HCAPLUS
DOCUMENT NUMBER: 142:45895
TITLE: Chemically amplified positive photo resist composition and method for forming resist pattern
INVENTOR(S): Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi, Toshihiro; Doi, Kosuke
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104702	A1	20041202	WO 2004-JP7139	2004 0519

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,

CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005244740 A1 20051103 US 2005-522036 2005 0119

PRIORITY APPLN. INFO.: JP 2003-141805 A 2003 0520

JP 2003-426503 A 2003 1224

WO 2004-JP7139 W 2004 0519

AB The disclosed chemical amplified pos. photoresist composition which comprises an organic solvent and, dissolved therein, a resin being prepared through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly soluble or insol. in an alkaline aqueous solution and exhibiting enhanced solubility into an aqueous alkali solution in the presence of an acid, and (B) a compound generating an acid by the irradiation with a radiation, wherein it contains an acid component in a amount of 10 ppm or less. The chemical amplified pos. photoresist composition can form a resist exhibiting good storage stability as a resist solution in a bottle.

IT **803688-35-9P**, m-Cresol-p-cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer **803688-36-0P**, m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether copolymer **803688-37-1P**, m-Cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer
(pos. photoresist composition containing acid generator and)

RN 803688-35-9 HCAPLUS

CN Benzaldehyde, 2-hydroxy-, polymer with bis[(ethenyloxy)methyl]cyclohexane, formaldehyde, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

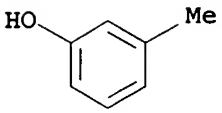
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

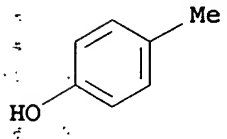
CM 2

CRN 108-39-4
CMF C7 H8 O



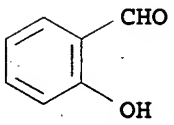
CM 3

CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 90-02-8
CMF C7 H6 O2



CM 5

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

RN 803688-36-0 HCAPLUS
CN Formaldehyde, polymer with bis[(ethenyloxy)methyl]cyclohexane and 3-methylphenol (9CI) (CA INDEX NAME)

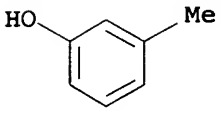
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

CRN 50-00-0
CMF C H2 O

H_2C═O

RN 803688-37-1 HCAPLUS
CN Benzaldehyde, 2-hydroxy-, polymer with bis[(ethenyloxy)methyl]cyclohexane, formaldehyde and 3-methylphenol (9CI) (CA INDEX NAME)

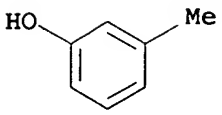
CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

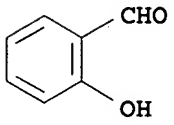
CM 2

CRN 108-39-4
CMF C7 H8 O



CM 3

CRN 90-02-8
CMF C7 H6 O2



CM 4

CRN 50-00-0
CMF C H2 O

IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-70-2P, p-Hydroxystyrene polymer 24979-74-6P, p-Hydroxystyrene-styrene copolymer **803688-35-9P**, m-Cresol-p-cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer **803688-36-0P**, m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether copolymer **803688-37-1P**, m-Cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-38-2P, Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether copolymer 803688-39-3P
(pos. photoresist composition containing acid generator and)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:475718 HCAPLUS
DOCUMENT NUMBER: 133:105731
TITLE: Thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition
INVENTOR(S): Ishidoya, Masahiro; Takemoto, Masayuki; Sato, Atsushi; Sato, Koji; Saito, Shun
PATENT ASSIGNEE(S): NOF Corporation, Japan
SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000040641	A1	20000713	WO 1999-JP6964	19991210
W: CA, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2322517	AA	20000713	CA 1999-2322517	19991210
EP 1059323	A1	20001213	EP 1999-959769	19991210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
TW 581796	B	20040401	TW 1999-88122900	19991224
US 6403670	B1	20020611	US 2000-623127	20001013

PRIORITY APPLN. INFO.: JP 1998-376957 A 19981228
WO 1999-JP6964 W 19991210

AB A thermosetting composition comprises (A) a polyhemiacetal ester resin OCOR1CO2CHMeYR2YCHMe (wherein R1 and R2 each is a divalent organic group and Y is oxygen or sulfur) and (B) a compound (e.g., epoxy resins) having per mol. two or more reactive functional groups capable of forming a chemical bond with a carboxyl group and optionally further contains (C) an acid catalyst. It gives at a relatively low temperature a cured article excellent in chemical performance, phys. performance, adhesion, smoothness, weatherability, etc., and has satisfactory storage stability. It is utilizable as the solvent-diluted type, solvent-free liquid type having an effective-ingredient content of 100 %, or powder type.

IT **283167-78-2P**
(thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition)

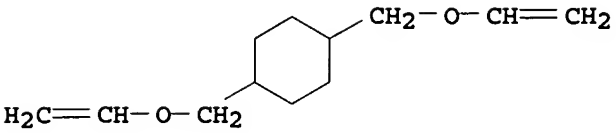
RN 283167-78-2 HCAPLUS

CN 1,4-Cyclohexanedicarboxylic acid, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, (chloromethyl)oxirane, formaldehyde, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

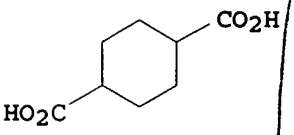
CRN 17351-75-6

CMF C12 H20 O2



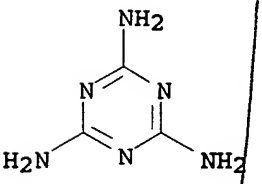
CM 2

CRN 1076-97-7
CMF C8 H12 O4



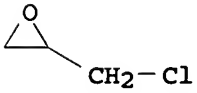
CM 3

CRN 108-78-1
CMF C3 H6 N6



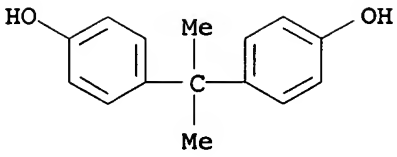
CM 4

CRN 106-89-8
CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2



CM 6

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

IC ICM C08G085-00
ICS C08G018-28; C08G059-42; C08G012-40; C08G077-445
CC 37-3 (Plastics Manufacture and Processing)
IT 283167-74-8P 283167-75-9P 283167-76-0P 283167-77-1P
283167-78-2P 283167-79-3P 283167-80-6P 283174-90-3P
(thermosetting composition containing polyhemiacetal ester resin and powdery thermosetting composition)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:795532 HCAPLUS
DOCUMENT NUMBER: 130:96603
TITLE: UV-curable resin compositions for electronic packaging materials and adhesives with excellent heat and moisture resistance
INVENTOR(S): Komori, Shinji; Miyake, Sumiya
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	D
JP 10330463	A2	19981215	JP 1997-141823	1997 0530
JP 3265466	B2	20020311		

PRIORITY APPLN. INFO.: JP 1997-141823 1997 0530

AB The compns. comprise (A) phenols or phenolic resins having electron-donating groups, (B) compds. having ≥2 C:C unsatd. bonds, and (C) cationic hardening initiators. Thus, a composition of PR 51767 60, 1,4-divinylbenzene 130, and SP 170 3 parts was cured with UV light to give a specimen showing Tg 163° and

excellent moisture resistance.

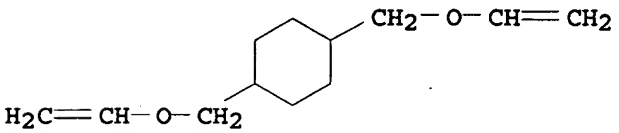
IT **219313-92-5P**, Cresol-2-cresol-1,4-cyclohexanedimethanol divinyl ether-formaldehyde copolymer **219313-94-7P**, Bisphenol A-2-cresol-1,4-cyclohexanedimethanol divinyl ether-formaldehyde copolymer
(UV-curable resin compns. for electronic packaging materials and adhesives with excellent heat and moisture resistance)

RN 219313-92-5 HCAPLUS

CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, methylphenol and 2-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 17351-75-6
CMF C12 H20 O2



CM 2

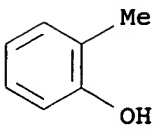
CRN 1319-77-3
CMF C7 H8 O
CCI IDS

D1—OH

D1—Me

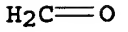
CM 3

CRN 95-48-7
CMF C7 H8 O



CM 4

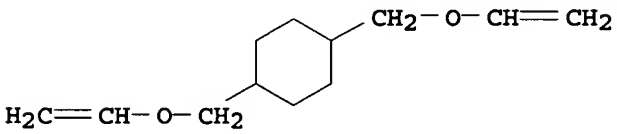
CRN 50-00-0
CMF C H2 O



RN 219313-94-7 HCAPLUS
CN Formaldehyde, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and 2-methylphenol (9CI) (CA INDEX NAME)

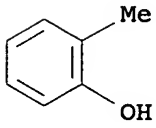
CM 1

CRN 17351-75-6
CMF C12 H20 O2



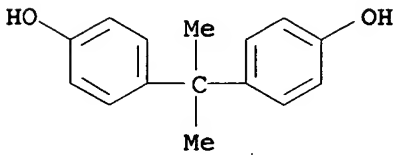
CM 2

CRN 95-48-7
CMF C7 H8 O



CM 3

CRN 80-05-7
CMF C15 H16 O2

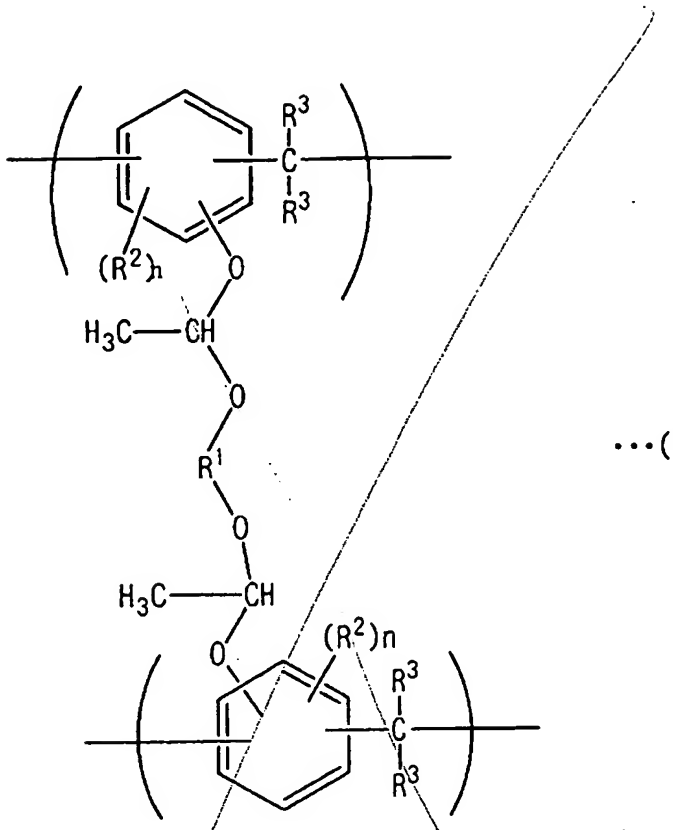


CM 4

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

IC ICM C08G061-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT 219313-91-4P, Cresol-1,4-divinylbenzene-formaldehyde copolymer
219313-92-5P, Cresol-2-cresol-1,4-cyclohexanedimethanol divinyl ether-formaldehyde copolymer 219313-93-6P, 3-Allyl-1,6-heptadiene-cresol-formaldehyde copolymer
219313-94-7P, Bisphenol A-2-cresol-1,4-cyclohexanedimethanol divinyl ether-formaldehyde copolymer
219313-95-8P, 2-Cresol-1,4-cyclohexanedimethanol divinyl ether copolymer 219313-96-9P, 1,4-Cyclohexanedimethanol divinyl ether-2-nitrophenol copolymer
(UV-curable resin compns. for electronic packaging materials and adhesives with excellent heat and moisture resistance)



...(III)

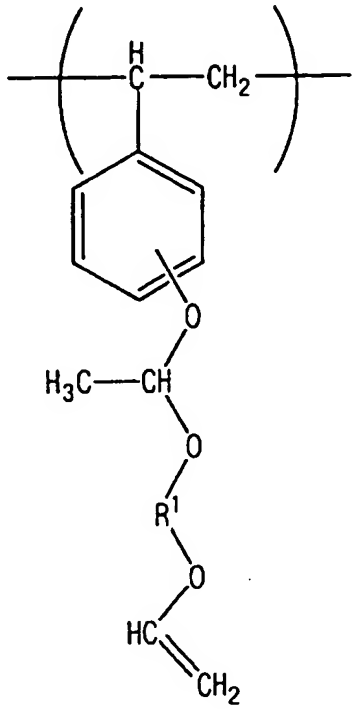
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain, R^2 and R^3 each independently represents hydrogen atom or alkyl group having 1 to 3 carbon atoms, and n represents an integer of 1 to 3; and

(B) a compound generating an acid under irradiation with radiation, in an organic solvent, wherein the content of an acid component is 10 ppm or less.

2. **(Original)** A chemical amplification type positive photoresist composition prepared by dissolving:

(A') an slightly alkali-soluble or alkali-insoluble polyhydroxystyrenic resin having a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising either

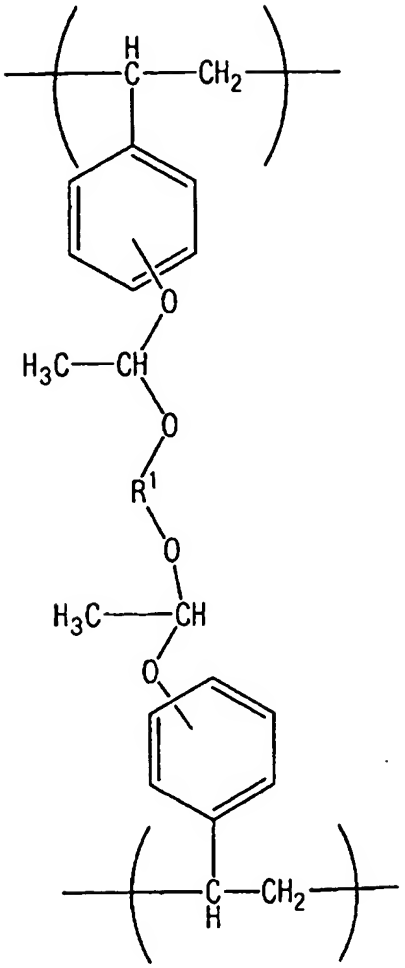
or both of a constituent unit (a'1) represented by the following general formula



...(IV)

(IV):

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have a oxygen bond (ether bond) in the main chain, and an intermolecular crosslinked moiety (a'2) represented by the following general formula (V):



...(V)

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1), the alkylene group may have an oxygen bond (ether bond) in the main chain; and
(B) a compound generating an acid under irradiation with radiation, in an organic solvent, wherein the content of an acid component is 10 ppm or less.

3. **(Original)** A chemical amplification type positive photoresist composition prepared by dissolving:
(A") a slightly alkali-soluble or alkali-insoluble polyhydroxystyrenic resin having such a property that solubility in an aqueous alkali solution is enhanced in the presence of an acid, comprising

7. **(Original)** The chemical amplification type positive photoresist composition according to any one of claims 1 to 3, which comprises γ-butyrolactone.

8. **(Original)** The chemical amplification type positive photoresist composition according to any one of claims 1 to 3, which is used for a thick-film photolithography process used for forming a resist film having a thickness of about 2 to 7 μm.

9. **(Original)** The chemical amplification type positive photoresist composition according to claim 8, wherein the thick-film photolithography process is used for forming a resist pattern for implantation.

10. **(Original)** A method for synthesis of the component (A) of claim 1, which comprises reacting a novolak resin with a crosslinking agent represented by the following general formula

$$H_2C{=}CH{-}O{-}R^1{-}O{-}CH{=}CH_2 \qquad \cdots(VI)$$

(VI):
wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the substantial absence of an acid catalyst.

11. **(Original)** A method for synthesis of the component (A') of claim 2, which comprises reacting a hydroxystyrenic resin with a crosslinking agent represented by the following general formula (VI):

$$H_2C{=}CH{-}O{-}R^1{-}O{-}CH{=}CH_2 \qquad \cdots(VI)$$

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the presence of an acid catalyst.

12. **(Original)** A method for synthesis of the component (A") of claim 3, which comprises reacting a hydroxystyrenic resin with a crosslinking agent represented by the following general formula (VI):

$$H_2C{=}CH{-}O{-}R^1{-}O{-}CH{=}CH_2 \qquad \cdots(VI)$$

wherein R^1 represents either an alkylene group having 1 to 10 carbon atoms which may have a substituent or a group represented by the above general formula (II) (wherein R^4 represents an alkylene group having 1 to 10 carbon atoms which may have a substituent and m represents 0 or 1, and the alkylene group may have an oxygen bond (ether bond) in the main chain, in the presence of an acid catalyst.

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 15:49:35 ON 13 MAR 2006

=> d his


     FILE 'HCAPLUS' ENTERED AT 11:01:28 ON 13 MAR 2006
L1             1 S US20050244740/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 11:02:37 ON 13 MAR 2006
L2            11 S E1-E11

     FILE 'LREGISTRY' ENTERED AT 11:28:52 ON 13 MAR 2006
L3               STR
L4               STR

     FILE 'REGISTRY' ENTERED AT 11:34:00 ON 13 MAR 2006
L5               SCR 2043
L6             1 S L3 AND L4 AND L5

     FILE 'LREGISTRY' ENTERED AT 11:34:54 ON 13 MAR 2006
L7             1 S L3 AND L5
L8               STR L3
L9             1 S L8
L10            0 S L8 AND L4 AND L5
                 E NOVOLAK/CN
L11            1 S E4
L12              STR
L13              STR
L14            0 S (L8 OR (L12 AND L13)) AND L4 AND L5
L15              STR L4
L16            0 S (L8 OR (L12 AND L13)) AND L15 AND L5
L17            0 S (L8 OR (L12 AND L13)) AND L15 AND L5 FUL

     FILE 'REGISTRY' ENTERED AT 12:17:16 ON 13 MAR 2006
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L19           41 S (L8 OR (L12 AND L13)) AND L15 AND L5 FUL
L20            0 S L19 AND L2
L21            1 S 24979-70-2/RN
L22            1 S 24979-74-6/RN
L23            1 S 803688-35-9/RN
L24            1 S 803688-38-2/RN
L25            1 S 803688-37-1/RN
L26            2 S L21 OR L22
L27            3 S L23-L25
L28              STR L8
L29              STR L12
L30           50 S L28 OR L29 AND L15 AND L5
L31           13 S (L28 OR L29) AND L15 AND L5
L32          353 S (L28 OR L29) AND L15 AND L5 FUL
L33            0 S L32 AND L2
L34           68 S 130668-21-2/CRN
L35            5 S L34 AND L2
L36              STR L15
L37            2 S L34 AND L32
L38           23 S L36
L39           50 S L36 AND L5
L40              STR L36
L41           50 S L40 AND L5
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L42             STR L40
L43          19 S L42 AND L5
L44         236 S  31257-96-2/CRN
L45           2 S L44 AND L2
L46        1380 S  108-39-4/CRN
L47        1406 S 106-44-5/CRN
L48        2311 S L46 OR L47
L49           4 S L34 AND L46
L50           4 S L34 AND L48
L51           4 S L49 OR L50
L52       26389 S 50-00-0/CRN
L53           6 S L52 AND L32
L54         347 S L32 NOT L53
L55           3 S L54 AND L44
L56        2043 S 2628-17-3/CRN
L57          32 S L56 AND L32
L58          35 S L55 OR L57
L59           2 S L32 AND L48
L60           6 S L53 OR L59
L61          10 S L60 OR L51
L62           2 S L44 AND L34
L63          37 S L58 OR L62
L64           2 S L2 AND L63
L65           3 S L2 AND L61
                SAV L32 LEE036/A

     FILE 'HCAPLUS' ENTERED AT 15:48:59 ON 13 MAR 2006
L66          29 S L63
L67           8 S L61



=> d que l66
L5              SCR 2043
L15             STR

Ak~Cb~Ak        Ak~O~Ak        Ak~O~Ak~O~Ak        CH2=CH~O
@8  9  10       @11 12  13     @14 15  16  17  18   1    2   3


G1 4      O~~CH=CH2
          5   6   7


VAR G1=AK/CB/8/11/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  18

STEREO ATTRIBUTES: NONE
L28             STR
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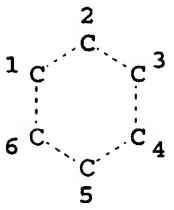
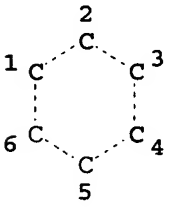


CH2═C OH 9
7 8

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L29 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 1
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

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L44	236	SEA	FILE=REGISTRY ABB=ON PLU=ON 31257-96-2/CRN
L52	26389	SEA	FILE=REGISTRY ABB=ON PLU=ON 50-00-0/CRN
L53	6	SEA	FILE=REGISTRY ABB=ON PLU=ON L52 AND L32
L54	347	SEA	FILE=REGISTRY ABB=ON PLU=ON L32 NOT L53
L55	3	SEA	FILE=REGISTRY ABB=ON PLU=ON L54 AND L44
L56	2043	SEA	FILE=REGISTRY ABB=ON PLU=ON 2628-17-3/CRN
L57	32	SEA	FILE=REGISTRY ABB=ON PLU=ON L56 AND L32
L58	35	SEA	FILE=REGISTRY ABB=ON PLU=ON L55 OR L57
L62	2	SEA	FILE=REGISTRY ABB=ON PLU=ON L44 AND L34
L63	37	SEA	FILE=REGISTRY ABB=ON PLU=ON L58 OR L62
L66	29	SEA	FILE=HCAPLUS ABB=ON PLU=ON L63

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:50:05 ON 13 MAR 2006

=> d l66 1-29 ibib abs hitstr hitind

L66 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:237967 HCAPLUS
DOCUMENT NUMBER: 142:325916
TITLE: Composition for antireflection film and resist pattern formation
INVENTOR(S): Nakayama, Kazuhiko
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070154	A2	20050317	JP 2003-209378	2003 0828

PRIORITY APPLN. INFO.: JP 2003-209378 2003 0828

AB The composition, for forming the antireflection film under pos.-working photoresist layer, contains (A) a resin, (B) a compound generating an acid by irradiation, (C) a light absorbing agent, and (D) an organic solvent, in which the composition crosslinks by heating and changes from insol. to soluble in alkaline solution by the action of acid generated from B. The resist pattern is manufactured by the steps of (1) coating the composition on a support and heating for antireflection film formation, (2) coating the pos. photoresist on the antireflection film and heating, (3) selectively exposing, (4) post-exposure baking, and (5) developing by an aqueous alkaline solution Mixing phenomena of the antireflection film and photoresist layer are prevented and the antireflection film can be removed without dry etching process.

IT **803688-39-3P**, Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer
(antireflection film for pos. photoresist pattern formation)
RN 803688-39-3 HCAPLUS
CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS

D1—OH

D1—CH═CH_2

IC ICM G03F007-11
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 803688-36-0P, Cyclohexanedimethanol divinyl ether-formaldehyde-m-cresol copolymer **803688-39-3P**, Cyclohexanedimethanol divinyl ether-hydroxystyrene copolymer
(antireflection film for pos. photoresist pattern formation)

L66 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:235470 HCAPLUS
DOCUMENT NUMBER: 142:325909
TITLE: Lift-off resist material and formation of resist pattern with controlled width of under layer
INVENTOR(S): Nakayama, Kazuhiko; Harada, Hisanori; Takagi, Isamu
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070153	A2	20050317	JP 2003-209377	2003 0828
PRIORITY APPLN. INFO.:			JP 2003-209377	2003 0828

AB The lift-off resist material, comprising (A) a resin, (B) a compound generating an acid by irradiation, and (C) an organic solvent, crosslinks by heating and changes from insol. to soluble in alkaline solution by the

action of acid generated from B. The lift-off resist pattern is manufactured by the steps of (1) forming an under resist layer by coating the lift-off resist material on a support and heating, (2) coating an upper resist layer comprising (non) chemical amplification-type pos. resist composition and heating, (3) selectively exposing, (4) post exposure baking, and (5) developing with an aqueous alkaline solution for forming resist pattern with cross section narrow at the interface between the support and the resist layer. The width of the under resist layer is controlled easily.

IT **803688-38-2P**, Cyclohexanedimethanol divinyl ether-hydroxystyrene-styrene copolymer
(lift-off resist material with under layer containing alkali-soluble resin and acid generator)

RN 803688-38-2 HCAPLUS

CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS

D1—OH

D1—CH═CH_2

CM 3

CRN 100-42-5

CMF C8 H8

$H_2C{=}CH{-}Ph$

IC ICM G03F007-26
ICS C08F008-00; C08G008-30; G03F007-039; G03F007-38; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 803688-35-9P, Cyclohexanedimethanol divinyl ether-m-cresol-p-cresol-formaldehyde-salicylaldehyde copolymer **803688-38-2P**, Cyclohexanedimethanol divinyl ether-hydroxystyrene-styrene copolymer
(lift-off resist material with under layer containing alkali-soluble resin and acid generator)

L66 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:33915 HCAPLUS
DOCUMENT NUMBER: 142:103184
TITLE: Chemically amplified positive photoresist compositions and method for forming resist patterns for system LCD with excellent heat resistance and sensitivity
INVENTOR(S): Nakagawa, Yusuke; Hidesaka, Shinichi; Miyagi, Masaru; Harada, Hisanobu
PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010213	A2	20050113	JP 2003-171027	2003 0616

PRIORITY APPLN. INFO.: JP 2003-171027 2003 0616

OTHER SOURCE(S): MARPAT 142:103184
AB The compns. with acid content ≤50 ppm contain alkali-soluble polymers, compds. H2C:CHOR1OCH:CH2 [R1 = (un)substituted C1-10 alkylene, R4mQR4m; R4 = (un)substituted C1-10 alkylene; m = 0, 1], photoacid generators, and organic solvents. The method contains applying the compns. on substrates, prebaking them, selectively exposing the resist films via masks with patterns of ≤2.0 μm and those of >2.0 μm, post-exposure baking them, and developing them in alkaline solns., thus giving resist patterns for IC and those for LCD units simultaneously.
IT **819800-41-4P**
(chemical amplified pos. photoresists for forming IC and LCD patterns on substrates simultaneously with good heat resistance and sensitivity)
RN 819800-41-4 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohex
ane and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

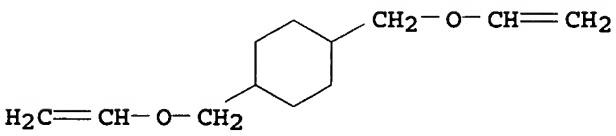
CRN 31257-96-2
CMF C8 H8 O
CCI IDS

D1—OH

D1—CH═CH$_2$

CM 2

CRN 17351-75-6
CMF C12 H20 O2



CM 3

CRN 100-42-5
CMF C8 H8

H_2C═CH—Ph

IC ICM G03F007-039
ICS G03F007-004; G03F007-027; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT 808750-79-0P **819800-41-4P**
(chemical amplified pos. photoresists for forming IC and LCD
patterns on substrates simultaneously with good heat resistance
and sensitivity)

L66 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1037374 HCAPLUS
DOCUMENT NUMBER: 142:45895
TITLE: Chemically amplified positive photo resist

composition and method for forming resist pattern

INVENTOR(S): Maruyama, Kenji; Kurihara, Masaki; Miyagi, Ken; Niikura, Satoshi; Shimatani, Satoshi; Masujima, Masahiro; Nitta, Kazuyuki; Yamaguchi, Toshihiro; Doi, Kosuke

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004104702	A1	20041202	WO 2004-JP7139	20040519
US 2005244740	A1	20051103	US 2005-522036	20050119

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

JP 2003-141805	A	20030520
JP 2003-426503	A	20031224
WO 2004-JP7139	W	20040519

AB The disclosed chemical amplified pos. photoresist composition which comprises an organic solvent and, dissolved therein, a resin being prepared through the reaction of a novolac resin or a hydroxystyrene resin with a crosslinking agent, being slightly soluble or insol. in an alkaline aqueous solution and exhibiting enhanced solubility into an aqueous alkali solution in the presence of an acid, and (B) a compound generating an acid by the irradiation with a radiation, wherein it contains an acid component in a amount of 10 ppm or less. The chemical amplified pos. photoresist composition can form a resist exhibiting good storage stability as a resist solution in a bottle.

IT **803688-38-2P**, Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether copolymer **803688-39-3P**

(pos. photoresist composition containing acid generator and)

RN 803688-38-2 HCAPLUS
CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane and ethenylbenzene (9CI) (CA INDEX NAME)

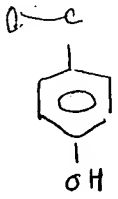
CM 1

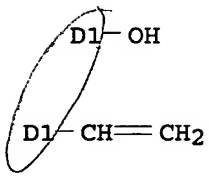
CRN 130668-21-2
CMF C12 H20 O2
CCI IDS

2 [D1—CH_2—O—CH═CH_2]

CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS





CM 3

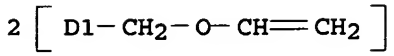
CRN 100-42-5
CMF C8 H8

H_2C═CH—Ph

RN 803688-39-3 HCAPLUS
CN Phenol, ethenyl-, polymer with bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

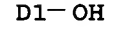
CM 1

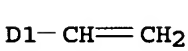
CRN 130668-21-2
CMF C12 H20 O2
CCI IDS



CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS





IC ICM G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-70-2P, p-Hydroxystyrene polymer 24979-74-6P, p-Hydroxystyrene-styrene copolymer 803688-35-9P, m-Cresol-p-cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-36-0P, m-Cresol-formaldehyde-cyclohexanedimethanol divinyl ether copolymer 803688-37-1P, m-Cresol-formaldehyde-salicylaldehyde-cyclohexanedimethanol divinyl ether copolymer **803688-38-2P**, Hydroxystyrene-styrene-cyclohexanedimethanol divinyl ether copolymer **803688-39-3P**
(pos. photoresist composition containing acid generator and)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:310382 HCAPLUS
DOCUMENT NUMBER: 140:347657
TITLE: Liquid crystal orientation film for liquid crystal display
INVENTOR(S): Kawamura, Koichi; Kondo, Shunichi; Yamaoka,

Tsugio; Watanabe, Hiroomi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004117878	A2	20040415	JP 2002-281440	2002 0926

PRIORITY APPLN. INFO.: JP 2002-281440 2002 0926

AB The title liquid crystal orientation film is prepared by thermally crosslinking between a compound having ≥2 enol ether groups, R1C(R2):C(R3)O- [R1-3 = H, alkyl, aryl; R1-R2, R2-R3, and R3-R1 may form ring], and a linear polymer compound having an acidic group or a hydroxyl group. By using the thermal crosslinking process, a good liquid crystal orientation is achieved without rubbing nor UV-irradiation processes.

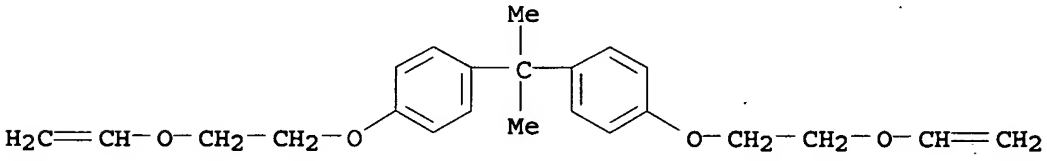
IT **462637-02-1P**
(liquid crystal orientation film prepared by thermal crosslinking process for liquid crystal display)

RN 462637-02-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

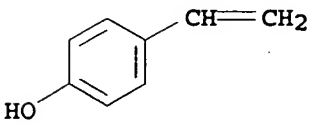
CM 1

CRN 52411-04-8
CMF C23 H28 O4



CM 2

CRN 2628-17-3
CMF C8 H8 O

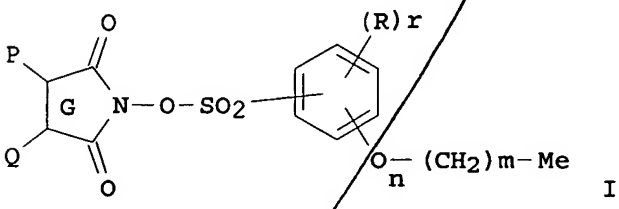


IC ICM G02F001-1337
ICS C08K005-06; C08L101-02
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **462637-02-1P**
(liquid crystal orientation film prepared by thermal crosslinking process for liquid crystal display)

L66 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:19898 HCAPLUS
DOCUMENT NUMBER: 140:84638
TITLE: N-sulfonyloxydicarboxyimides as photoacid generators for chemically amplified resists and patterning method
INVENTOR(S): Osawa, Yoichi; Kobayashi, Katsuhiro; Maeda, Kazunori; Miyakoshi, Hiroshi; Tanaka, Yoshio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 58 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002291	A2	20040108	JP 2002-364156	2002 1216
PRIORITY APPLN. INFO.:			JP 2001-393187 A	2001 1226

OTHER SOURCE(S): MARPAT 140:84638
GI



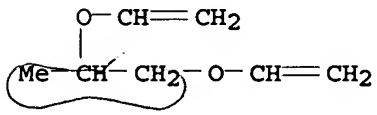
I

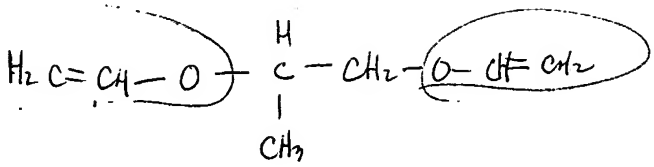
AB The N-sulfonyloxydicarboxyimides are I (R = H, F, C1-4 (cyclo)alkyl, C1-4 alkoxy; G = single bond, double bond, P, Q = H, C1-10 alkyl; P and Q may form alycyclic or heterocyclic structures or aromatic ring; m = 3-11; n = 0, 1; r = 0-4). The resists contain polymers changing alkali solubility by acid action and the N-sulfonyloxydicarboxyimides generating acids by radiation irradiation The resists are patternwise exposed with radiation at ≤300 nm or electron beam via photomasks. The resists remain no foreign substances on developping and stripping.
IT **369385-37-5D**, ethoxyethyl ether
(N-sulfonyloxydicarboxyimides as photoacid generators for far-UV or electron beam resists remaining no foreign substances

on stripping)
RN 369385-37-5 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI) (CA INDEX NAME)

CM 1

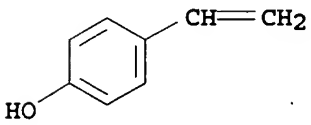
CRN 71545-61-4
CMF C7 H12 O2





CM 2

CRN 2628-17-3
CMF C8 H8 O



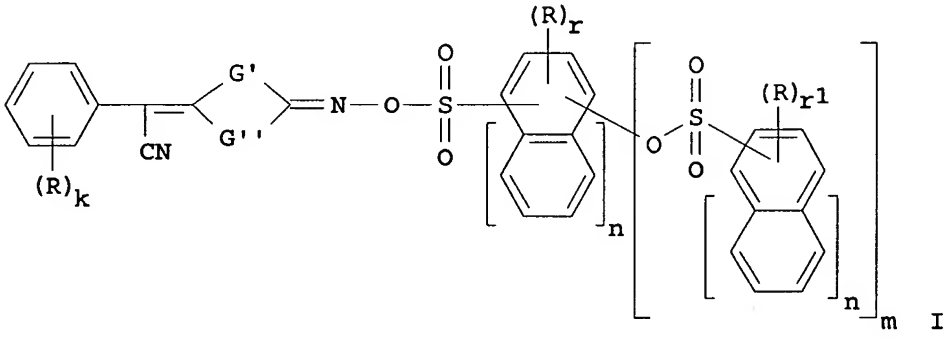
IC ICM C07D207-408
ICS C07D209-76; C07D491-18; C08F212-14; G03F007-004; G03F007-039; H01L021-027; H01L021-30
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 27
IT 24979-70-2D, p-Hydroxystyrene homopolymer, ethoxyethyl ether 130501-59-6 147625-42-1D, ethoxyethyl ether 159296-87-4, tert-Butyl acrylate-p-hydroxystyrene copolymer 326925-68-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer 345580-95-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene-styrene copolymer **369385-37-5D**, ethoxyethyl ether 406909-44-2 552840-49-0 595558-21-7 640277-35-6, p-Hydroxystyrene-indene copolymer tert-butoxycarboxylate ester
(N-sulfonyloxydicarboxyimides as photoacid generators for far-UV or electron beam resists remaining no foreign substances on stripping)

L66 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:912695 HCAPLUS
DOCUMENT NUMBER: 139:401547
TITLE: Photoacid generators and chemically amplified resist compositions for patterning process
INVENTOR(S): Ohsawa, Youichi; Kobayashi, Katsuhiro; Takemura, Katsuya; Tsuchiya, Junji; Maeda, Kazunori
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 49 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003215738	A1	20031120	US 2003-393006	2003 0321
US 6916591	B2	20050712		
JP 2004004614	A2	20040108	JP 2003-71473	2003 0317
PRIORITY APPLN. INFO.:			JP 2002-80649 A	2002 0322

OTHER SOURCE(S): MARPAT 139:401547
GI



AB Photoacid generators are provided by O-arylsulfonyl-oxime compds. having general formula I (R = H, F, Cl, NO2, alkyl, alkoxy; n = 0, 1; m = 1, 2; r = 0-4; r1 = 0-5; k = 0-4; G1, G2 = S, -CH=CH-). Chemical amplified resist compns. comprising the photoacid generators have many advantages including improved resolution, improved focus latitude, minimized line width variation or shape degradation even on long-term PED, and improved pattern profile after development. Because of high resolution, the compns. are suited for microfabrication, especially by deep UV lithog.

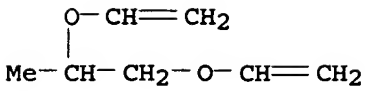
IT **369385-37-5D**, ethoxyethyl derivs.
(photoacid generators and chemical amplified resist compns. for patterning process)

RN 369385-37-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI) (CA INDEX NAME)

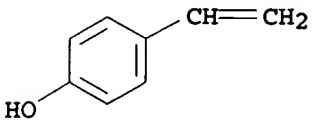
CM 1

CRN 71545-61-4
CMF C7 H12 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



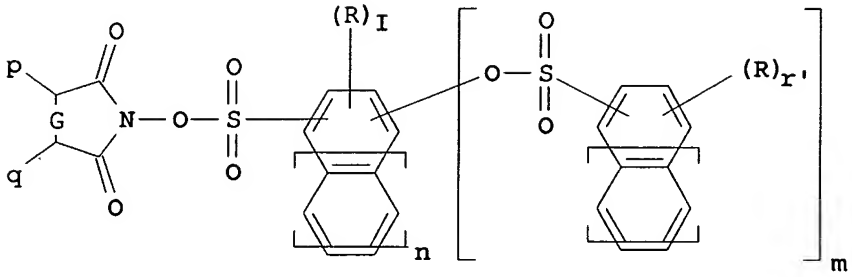
IC ICM G03F007-004
ICS C07C309-76; C07D333-36
INCL 430270100; 430921000; 430919000; 430326000; 549063000; 558047000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 24979-70-2D, Poly(p-hydroxystyrene), acetyl, ethoxyethyl and tert-butoxycarbonyl derivs. 159296-87-4, p-Hydroxystyrene-tert-butyl acrylate copolymer 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 345580-95-2 **369385-37-5D**, ethoxyethyl derivs. 552840-49-0 552840-50-3 552840-52-5D, tert-butoxycarbonyl derivs. 552840-54-7
(photoacid generators and chemical amplified resist compns. for patterning process)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:711621 HCAPLUS
DOCUMENT NUMBER: 139:252510
TITLE: N-Solfonyloxydicarboxyimide compounds for use as photo acid-generator in chemically amplified photoresists
INVENTOR(S): Osawa, Yoichi; Kobayashi, Katsuhiro; Maeda, Kazunori; Miyakoshi, Hiroshi; Tanaka, Yoshio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003252855	A2	20030910	JP 2002-364254	2002 1216

PRIORITY APPLN. INFO.: JP 2001-393194 A 2001 1226

OTHER SOURCE(S): MARPAT 139:252510
GI



I

AB N-Solfonyloxydicarboxyimide compds. having general structure I is claimed to be used as photo acid-generator in chemical amplified photoresists (R = H, F, NO2, alkyl, alkoxy; n = 0, 1; m = 1, 2;r = 0-4, r' = 0-5; G = single or double bond; p, q = H, alkyl, or form alicyclic ring, heterocyclic ring, or aromatic ring). A chemical amplified photoresist containing the acid generator is also claimed.

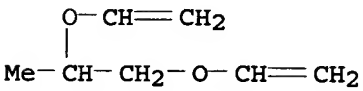
IT **369385-37-5D**, 2-ethoxyethyl ether
(chemical amplified photoresist containing N-solfonyloxydicarboxyimide photo acid-generator)

RN 369385-37-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI) (CA INDEX NAME)

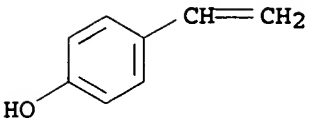
CM 1

CRN 71545-61-4
CMF C7 H12 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM C07D207-408
ICS C07D209-76; G03F007-004; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-70-2D, 2-ethoxyethyl ether 121273-79-8 121273-79-8D, 2-ethoxyethyl ether 130501-59-6 159296-87-4 326925-68-2 345580-95-2 **369385-37-5D**, 2-ethoxyethyl ether 406909-44-2 595558-21-7 595559-74-3
(chemical amplified photoresist containing N-solfonyloxydicarboxyimide photo acid-generator)

L66 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:802782 HCAPLUS
DOCUMENT NUMBER: 137:331071
TITLE: Photomask manufacture using alkaline-developable positive-working photoresist composition
INVENTOR(S): Sakamizu, Toshio; Arai, Tadashi; Utaka, Sonoko
PATENT ASSIGNEE(S): Hitachi Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

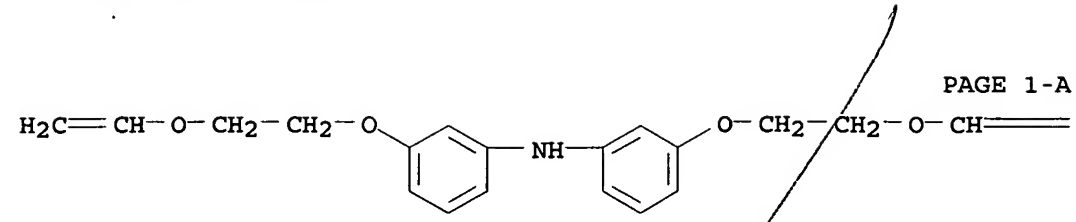
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002311566	A2	20021023	JP 2001-117606	2001 0417

PRIORITY APPLN. INFO.: JP 2001-117606 2001 0417

AB The invention relates to a photomask manufacture utilizing an alkaline-developable pos.-working photoresist composition, wherein the photoresist composition comprises (A) a photoacid generator and (B) a polymer obtained by polymerizing a binder resin containing a carboxyl group and/or phenylic group, a vinyl ether compound, and a N-containing crosslinking agent, and the patterning is carried out by electron beams. The photoresist composition shows excellent properties and is suitable as a chemical amplification type.
IT **473722-84-8P**
(photomask manufacture using alkaline-developable pos.-working photoresist composition containing)
RN 473722-84-8 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 3-[2-(ethenyloxy)ethoxy]-N-[3-[2-(ethenyloxy)ethoxy]phenyl]benzenamine and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

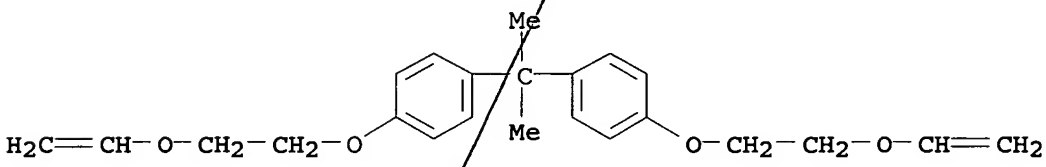
CM 1

CRN 473722-80-4
CMF C20 H23 N O4



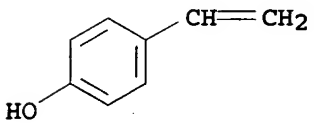
CM 2

CRN 52411-04-8
CMF C23 H28 O4



CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F001-08
ICS G03F001-08; G03F007-039; G03F007-20; G03F007-38; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

IT 473722-81-5P 473722-83-7P **473722-84-8P** 473722-85-9P
473722-86-0P 473722-87-1P 473722-88-2P 473722-89-3P
473722-93-9P 473722-94-0P 473722-95-1P 473722-96-2P
473722-97-3P
(photomask manufacture using alkaline-developable pos.-working photoresist composition containing)

L66 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:544967 HCAPLUS
DOCUMENT NUMBER: 137:263723
TITLE: Vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye
AUTHOR(S): Noppakundilograt, Supaporn; Suzuki, Shota; Urano, Toshiyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
CORPORATE SOURCE: Department of Image Science, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
SOURCE: Polymers for Advanced Technologies (2002), 13(7), 527-533
CODEN: PADTE5; ISSN: 1042-7147
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

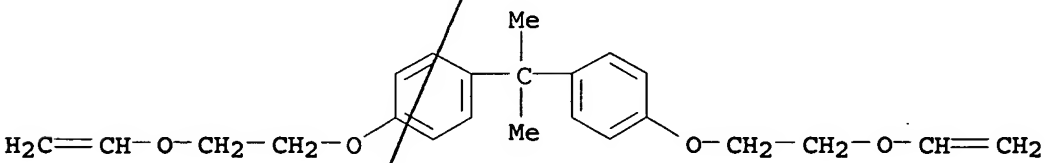
AB A visible light (vis)-sensitive photoresist based on the concept of chemical amplification was developed utilizing poly(p-hydroxystyrene) (PHS), 2,2-bis[4-(2-(vinyloxy)-ethoxy)phenyl]propane (BPA-DEVE) as a crosslinking agent, N-trifluoromethylsulfonyloxy-1,8-naphthalimide (NIT) as a photoacid generator (PAG) and pyrromethene dyes such as 1,3,5,7,9-pentamethylbipyrromethene difluoroborate (PRH) and 2,8-diethyl-1,3,5,7,9-pentamethylbipyrromethene difluoroborate (PRE) and 3,3'-carbonylbis(7,7'-diethylaminocoumarin) (KCD). On irradiation with an argon ion laser, the photopolymer comprising PRH and PRE exhibited a high sensitivity of 65 and 46 mJ cm-2, resp. The sensitization mechanism of the pyrromethene dye/PAG system involves singlet electron transfer. The sensitivity of the photoresist increased with the decreasing mol. weight of PHS because of the high dissoln. rate.

IT **462637-02-1P**
(sensitization mechanism and sensitivity of vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye)

RN 462637-02-1 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

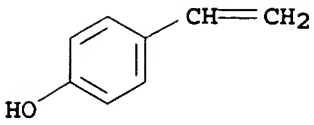
CM 1

CRN 52411-04-8
CMF C23 H28 O4



CM 2

CRN 2628-17-3
CMF C8 H8 O



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 74
IT **462637-02-1P**
(sensitization mechanism and sensitivity of vis-sensitive photopolymer containing vinyl ether compound and pyrromethene dye)
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:538439 HCAPLUS
DOCUMENT NUMBER: 137:101421
TITLE: Radiation-sensitive resin compositions for chemically amplified deep UV resists and electron-beam resists
INVENTOR(S): Suzuki, Aki; Niwata, Koichi; Yokoyama, Kenichi; Kobayashi, Eiichi
PATENT ASSIGNEE(S): JSR Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002202603	A2	20020719	JP 2000-340798	2000 1108
PRIORITY APPLN. INFO.:			JP 2000-323160 A	2000 1023

OTHER SOURCE(S): MARPAT 137:101421
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The compns. having high sensitivity to KrF or ArF excimer lasers, electron beams, etc., contain (A) radiation-sensitive acid generators I and/or II (R1, R2 = C1-10 linear, branched, or cyclic alkyl, C1-10 linear, branched, or cyclic fluoroalkyl, C6-11 aryl which may be substituted with F) and (B) resins containing repeating units of acetalated styrene derivs. such as p-(1-ethoxyethoxy)styrenes and p-hydroxystyrene. The compns. give sharp patterns with suppressed nanoedge roughness.
IT **259214-34-1**, Diethylene glycol divinyl ether-ethyl vinyl

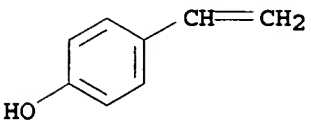
ether-p-hydroxystyrene copolymer
(partially crosslinked; radiation-sensitive resin compns. for chemical amplified deep UV resists and EB resists)

RN 259214-34-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethoxyethene and 1,1'-[oxybis(2,1-ethanediyloxy)]bis[ethene] (9CI) (CA INDEX NAME)

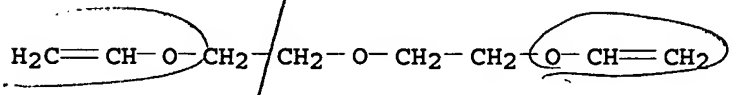
CM 1

CRN 2628-17-3
CMF C8 H8 O



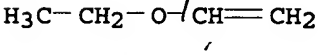
CM 2

CRN 764-99-8
CMF C8 H14 O3



CM 3

CRN 109-92-2
CMF C4 H8 O



IC ICM G03F007-039
ICS C08K005-36; C08L025-18; C09K003-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **259214-34-1**, Diethylene glycol divinyl ether-ethyl vinyl ether-p-hydroxystyrene copolymer
(partially crosslinked; radiation-sensitive resin compns. for chemical amplified deep UV resists and EB resists)

L66 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
2002:407173 HCAPLUS
136:409029
Chemically amplified radiation-sensitive resists with small nanoedge roughness
Suzuki, Aki; Murata, Makoto; Hara, Hiromichi; Kobayashi, Eiichi
Jsr Ltd., Japan
Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
Patent
Japanese

USHA SHRESTHA EIC 1700 REM 4B28

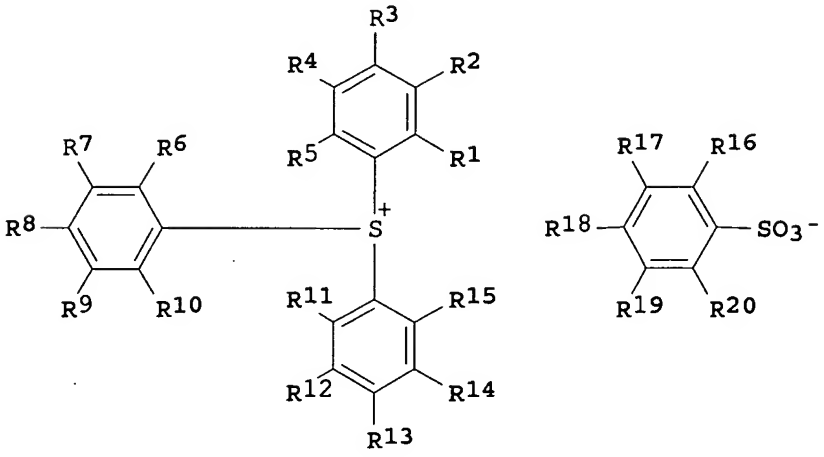
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002156759	A2	20020531	JP 2000-350227	2000 1116
US 2002090569	A1	20020711	US 2001-987916	2001 1116
US 6899989	B2	20050531		
US 2005158657	A1	20050721	US 2005-80400	2005 0316

PRIORITY APPLN. INFO.: JP 2000-350227 A 2000 1116

US 2001-987916 A1 2001 1116

OTHER SOURCE(S): MARPAT 136:409029
GI



I

AB The resists, suited for microlithog. in fabrication of integrated circuit devices, contain triarylsulfonium compds. I [R1-15 = H, OH, C1-10 alkyl(oxy), tert-butoxycarbonylmethoxy; ≥2 of R1-5 and ≥2 of R6-15 are groups excluding H; R16-20 = H, F, CF3; ≥1-5 of R16-20 are F or CF3] as radiation-sensitive acid generators and resins having 4-hydroxystyrene units and [HC[p-C6H4OHR21(OR22)]CH2] (R21 = Me, Et; R22 = C1-6 alkyl).

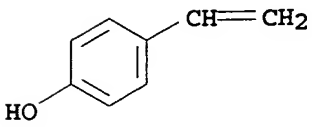
IT **431059-78-8D**, partially acetalized
(chemical amplified radiation-sensitive resists containing sp. arylsulfonium compds. and showing small edge roughness)

RN 431059-78-8 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,1'-[oxybis(2,1-ethanediyloxy)]bis[ethene] (9CI) (CA INDEX NAME)

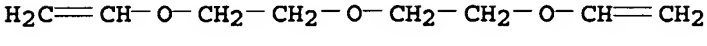
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 764-99-8
CMF C8 H14 O3



IC ICM G03F007-039
ICS C08K005-375; C08K005-42; C08L025-18; C09K003-00; G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
IT 24979-70-2D, Poly(p-hydroxystyrene), partially acetalized 24979-74-6D, p-Hydroxystyrene-styrene copolymer, partially acetalized 159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, partially acetalized **431059-78-8D**, partially acetalized
(chemical amplified radiation-sensitive resists containing sp. arylsulfonium compds. and showing small edge roughness)

L66 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:388491 HCAPLUS
DOCUMENT NUMBER: 136:409018
TITLE: Lithographic production of stamper for optical disk by using x ray-sensitive positive-working resist as mask
INVENTOR(S): Sakamizu, Toshio; Shiraishi, Hiroshi
PATENT ASSIGNEE(S): Hitachi Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002150620	A2	20020524	JP 2000-341912	2000 1109

PRIORITY APPLN. INFO.: JP 2000-341912
2000
1109

AB In the production, the resist is an alkali-developable and contains a photoacid generator, and a medium whose solubility to alkalies increases and weight average mol. weight decreases to ≤1/2 that of before, upon exposure to light. The resist provides high-resolution and precise pattern.

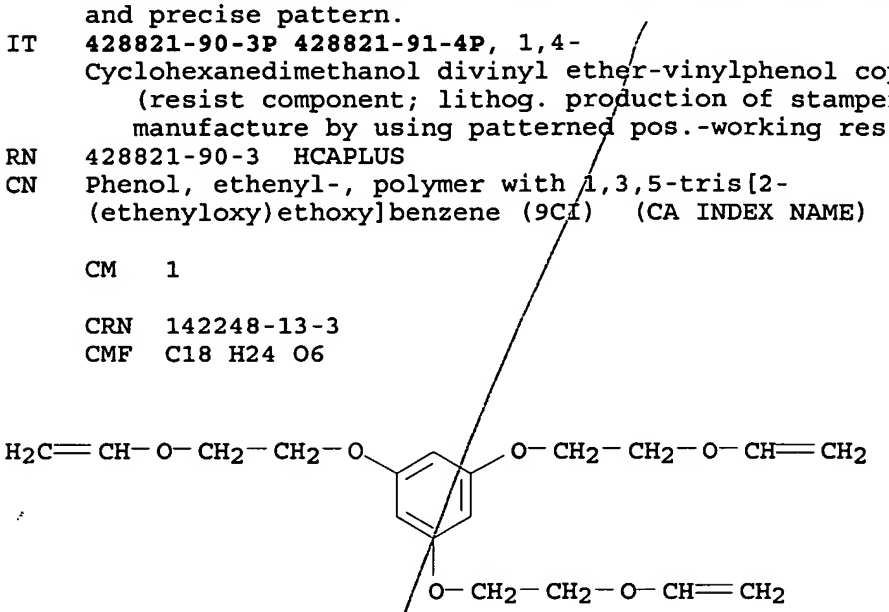
IT **428821-90-3P 428821-91-4P**, 1,4-Cyclohexanedimethanol divinyl ether-vinylphenol copolymer
(resist component; lithog. production of stamper for optical disk manufacture by using patterned pos.-working resist as mask)

RN 428821-90-3 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,3,5-tris[2-(ethenyloxy)ethoxy]benzene (9CI) (CA INDEX NAME)

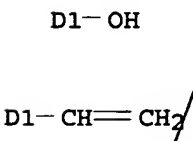
CM 1

CRN 142248-13-3
CMF C18 H24 O6



CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS



RN 428821-91-4 HCAPLUS

CN Phenol, ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 31257-96-2
CMF C8 H8 O

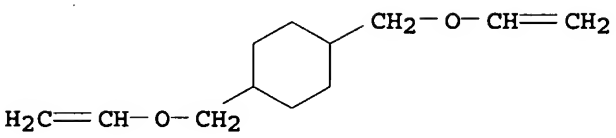
CCI IDS

D1—OH

D1—CH═CH$_2$

CM 2

CRN 17351-75-6
CMF C12 H20 O2



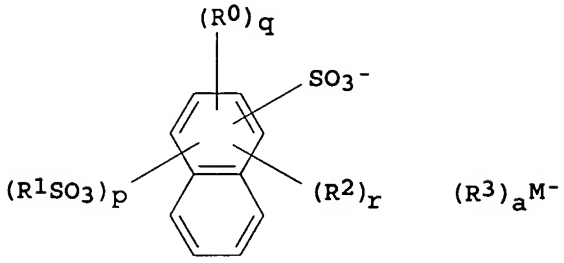
IC ICM G11B007-26
ICS G03F007-039; G03F007-26; G03F007-40
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **428821-90-3P 428821-91-4P**, 1,4-Cyclohexanedimethanol divinyl ether-vinylphenol copolymer 428821-92-5P 428821-93-6P 428821-94-7P
(resist component; lithog. production of stamper for optical disk manufacture by using patterned pos.-working resist as mask)

L66 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:347375 HCAPLUS
DOCUMENT NUMBER: 136:361822
TITLE: Sulfonium or iodonium naphthalenesulfonate, photosensitive acid-generating agent for photoresist, photoresist material, and method for patterning
INVENTOR(S): Osawa, Yoichi; Watanabe, Atsushi; Nagata, Takashi; Hatakeyama, Jun
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2002128758	A2	20020509	JP 2000-322189	2000 1023
TW 594402	B	20040621	TW 2001-90126078	2001 1022
US 2002076643	A1	20020620	US 2001-983155	2001 1023
US 6692893	B2	20040217		
PRIORITY APPLN. INFO.:			JP 2000-322189 A	2000 1023

OTHER SOURCE(S): MARPAT 136:361822
GI



I

AB The onium salt is that represented as I [R1 = C6-14 (substituted) aryl; R2 = H, (substituted) C1-6 linear, branched, or cyclic alkyl; R0 = OH, alkoxy, halogen, NO2; p = 1, 2; q, r = 0-2; R3 = (substituted) C1-10 linear, branched, or cyclic alkyl, (substituted) C6-14 aryl; M = S and a = 3; M = iodine and a = 2], which is used as the photosensitive acid-generating agent in the chemical amplified photoresist. The photoresist material contains a resin whose alkaline developer solubility is changed by activity of acids and the above agent. The photoresist material is applied on a substrate, heated, exposed to a high-energy beam or electron beam with wavelength ≤300 nm, and developed optionally after postbaking. The photoresist shows good stability in post exposure delay (PED).

IT **326925-72-8 326925-73-9**
(sulfonium or iodonium naphthalenesulfonate as photosensitive acid-generating agent in chemical-amplified photoresist)

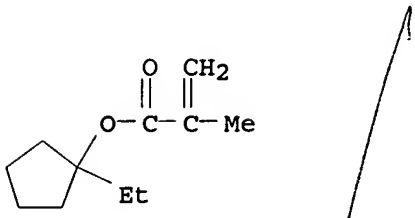
RN 326925-72-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

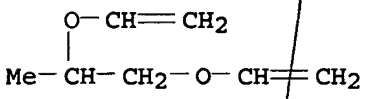
CRN 266308-58-1

CMF C11 H18 O2



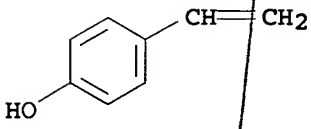
CM 2

CRN 71545-61-4
CMF C7 H12 O2



CM 3

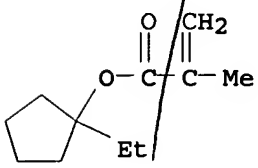
CRN 2628-17-3
CMF C8 H8 O



RN 326925-73-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

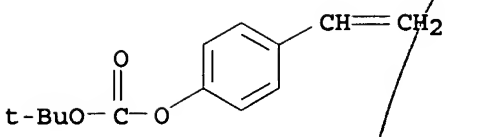
CM 1

CRN 266308-58-1
CMF C11 H18 O2



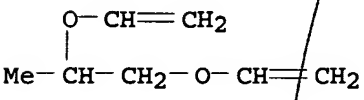
CM 2

CRN 87188-51-0
CMF C13 H16 O3



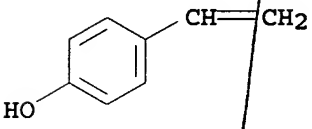
CM 3

CRN 71545-61-4
CMF C7 H12 O2



CM 4

CRN 2628-17-3
CMF C8 H8 O



IC ICM C07C381-12
ICS C07C025-02; C07C309-35; C07C309-74; C08K005-09; C08K005-16; C08K005-42; C08L025-18; C08L033-02; C09K003-00; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 23

IT 24979-70-2D, Poly(p-hydroxystyrene), partially etherified and esterified 71545-61-4D, polyhydroxystyrene crosslinked with 161453-44-7 195723-94-5, [4-(tert-Butoxy)phenyl]diphenylsulfonium 10-camphorsulfonate 326925-68-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer 326925-71-7 **326925-72-8 326925-73-9** 345580-95-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene-styrene copolymer 422309-72-6
(sulfonium or iodonium naphthalenesulfonate as photosensitive acid-generating agent in chemical-amplified photoresist)

L66 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:817219 HCAPLUS
DOCUMENT NUMBER: 135:350570
TITLE: Chemically amplified positive resist compositions with improved resolution, pattern profile and focal latitude for deep UV lithography
INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Takeda, Takanobu; Seki, Akihiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 33 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001038971	A1	20011108	US 2001-799052	2001 0306
US 6682869	B2	20040127		
JP 2001324813	A2	20011122	JP 2001-57719	2001 0302
TW 538312	B	20030621	TW 2001-90105205	2001 0306

PRIORITY APPLN. INFO.: JP 2000-61350 A 2000 0307

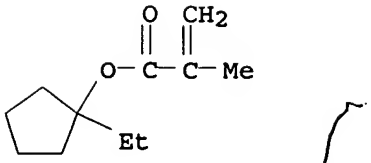
AB A chemical amplified, pos. resist composition is provided comprising (A) a photoacid generator and (B) a resin which changes its solubility in an alkali developer under the action of acid and has substituents of the formula: Ph-(CH2)nOCH(CH2CH3)- (n = 0,1). The composition has many advantages including improved focal latitude, improved resolution, minimized line width variation or shape degradation even on long-term PED, minimized defect left after coating, development and stripping, and improved pattern profile after development and is suited for microfabrication by any lithog., especially deep UV lithog.

IT **362478-99-7D**, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. **362479-00-3D**, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, 1-phenethyloxypropyl derivs. **369385-37-5D**, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, 1-benzyloxypropyl and 1-ethoxypropyl derivs.
(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

RN 362478-99-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

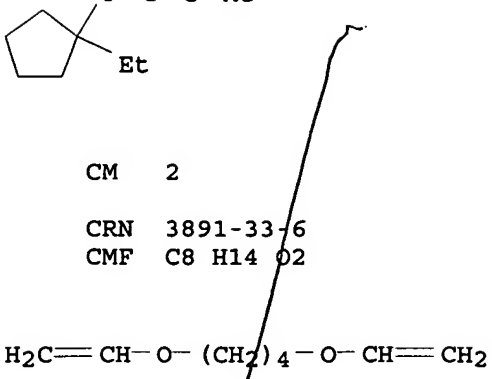
CM 1

CRN 266308-58-1
CMF C11 H18 O2



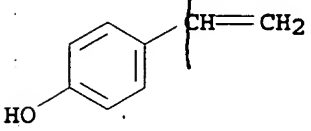
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

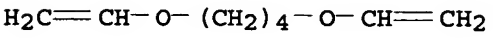
CRN 2628-17-3
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI) (CA INDEX NAME)

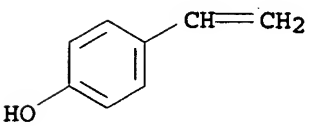
CM 1

CRN 3891-33-6
CMF C8 H14 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

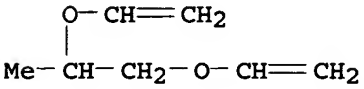


RN 369385-37-5 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI)

(CA INDEX NAME)

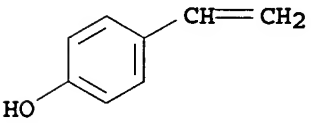
CM 1

CRN 71545-61-4
CMF C7 H12 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, 1-benzyloxypropyl derivs. 200808-68-0D, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer, 1-benzyloxypropyl derivs. 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-68-2D, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. **362478-99-7D**, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, 1-benzyloxypropyl derivs. **362479-00-3D**, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, 1-phenethyloxypropyl derivs. **369385-37-5D**, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, 1-benzyloxypropyl and 1-ethoxypropyl derivs.
(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

L66 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:781404 HCAPLUS
DOCUMENT NUMBER: 135:336907
TITLE: Chemically amplified positive resist compositions with improved resolution, pattern profile and focal latitude for deep UV lithography
INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Takeda, Takanobu; Seki, Akihiro
PATENT ASSIGNEE(S): Shi-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 34 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001033994	A1	20011025	US 2001-799009	2001 0306
US 6838224	B2	20050104		
JP 2001324812	A2	20011122	JP 2001-57716	2001 0302
TW 587086	B	20040511	TW 2001-90105203	2001 0306

PRIORITY APPLN. INFO.: JP 2000-61357 A 2000 0307

AB A chemical amplified, pos. resist composition is provided comprising (A) a photoacid generator and (B) a resin which changes its solubility in an alkali developer under the action of acid and has substituents of the formula: C6H11 -(CH2)nOCH(CH2CH3)- wherein C6H11 is cyclohexyl and n = 0,1. The composition has many advantages including improved focal latitude, improved resolution, minimized line width variation or shape degradation even on long-term PED, minimized defect left after coating, development and stripping, and improved pattern profile after development and is suited for microfabrication by any lithog., especially deep UV lithog.

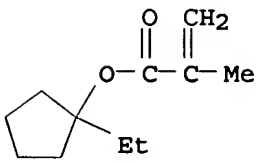
IT **362478-99-7D**, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers **362479-00-3D**, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, cyclohexylmethyloxypropyl derivs. **369385-37-5D**, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, cyclohexyloxypropyl and 1-ethoxypropyl derivs.
(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)

RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

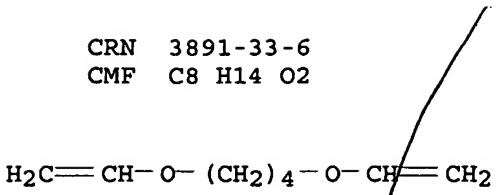
CM 1

CRN 266308-58-1
CMF C11 H18 O2



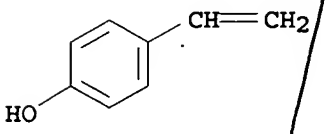
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

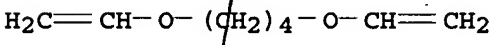
CRN 2628-17-3
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI) (CA INDEX NAME)

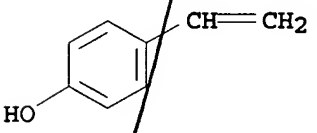
CM 1

CRN 3891-33-6
CMF C8 H14 O2



CM 2

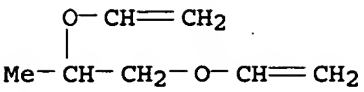
CRN 2628-17-3
CMF C8 H8 O



RN 369385-37-5 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,2-bis(ethenyloxy)propane (9CI) (CA INDEX NAME)

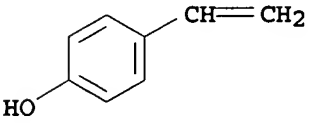
CM 1

CRN 71545-61-4
CMF C7 H12 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
INCL 430287100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 159296-87-4D, tert-Butyl acrylate-p-hydroxystyrene copolymer, cyclohexyloxypropyl ethers 200808-68-0D, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer, cyclohexyloxypropyl ethers 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-68-2D, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers **362478-99-7D**, 1,4-Butanediol divinyl ether-p-hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer, cyclohexyloxypropyl ethers **362479-00-3D**, 1,4-Butane diol divinyl ether-p-hydroxystyrene copolymer, cyclohexylmethyloxypropyl derivs. **369385-37-5D**, p-Hydroxystyrene-1,2-Bis(vinyloxy)propane copolymer, cyclohexyloxypropyl and 1-ethoxypropyl derivs.
(chemical amplified pos. resist compns. with improved resolution, pattern profile and focal latitude for deep UV lithog.)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:763485 HCAPLUS
DOCUMENT NUMBER: 135:310937
TITLE: Chemical amplification resist compositions
INVENTOR(S): Takeda, Takanobu; Watanabe, Osamu; Hirahara, Kazuhiro; Takemura, Katsuya; Kusaki, Wataru; Seki, Akihiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2001031421	A1	20011018	US 2001-800512	2001 0308
US 6737214	B2	20040518		
JP 2001324814	A2	20011122	JP 2001-59519	2001 0305
TW 538088	B	20030621	TW 2001-90105442	2001 0308
PRIORITY APPLN. INFO.:			JP 2000-64277	A 2000 0309

AB A chemical amplification pos. resist composition comprises a polymeric mixture of a polyhydroxystyrene derivative having a mol. weight of 1000-500,000 and a copolymer of hydroxystyrene and (meth)acrylate having a mol. weight of 1000-500,000, as a base resin, has improved dry etching resistance, high sensitivity, high resolution, and process adaptability, and is suppressed in the slimming of pattern films after development with aqueous base.

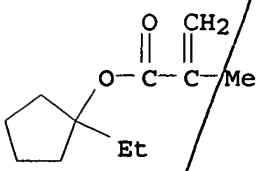
IT **362478-99-7**, 1,4-Butanediol divinyl ether-1-ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer
362479-00-3D, 1,4-Butanediol divinyl ether-p-hydroxystyrene copolymer, ethoxyethyl ether
(chemical amplification resist compns. containing)

RN 362478-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

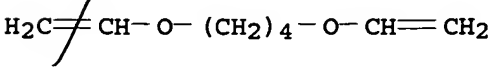
CM 1

CRN 266308-58-1
CMF C11 H18 O2



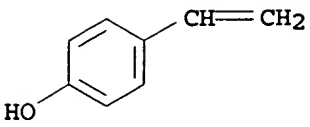
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

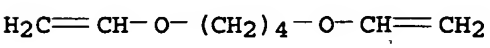
CRN 2628-17-3
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI) (CA INDEX NAME)

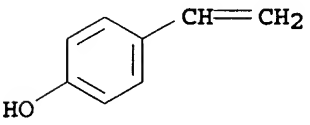
CM 1

CRN 3891-33-6
CMF C8 H14 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether and t-butylcarbonate 362478-98-6, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene-isobornyl acrylate copolymer **362478-99-7**, 1,4-Butanediol divinyl ether-1-ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer **362479-00-3D**, 1,4-Butanediol divinyl ether-p-hydroxystyrene copolymer, ethoxyethyl ether 362479-01-4
(chemical amplification resist compns. containing)

L66 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:709843 HCAPLUS
DOCUMENT NUMBER: 135:264558
TITLE: Chemically amplified positive resist composition and patterning method
INVENTOR(S): Takeda, Takanobu; Watanabe, Jun; Takemura, Katsuya; Koizumi, Kenji
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 60 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1136885	A1	20010926	EP 2001-302636	20010321
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001337457	A2	20011207	JP 2001-75477	20010316
TW 228203	B1	20050221	TW 2001-90106640	20010321
US 2001035394	A1	20011101	US 2001-814049	20010322
US 6593056	B2	20030715		
PRIORITY APPLN. INFO.:			JP 2000-79414 A	20000322

AB A chemical amplified, pos. resist composition comprises (1) organic solvent, (2) polymer having acid labile groups, (3) photoacid generator, (4) basic compound, and (5) compound containing at least two allyloxy groups of R1R2C=CR3CHR4O (R1,4 = H, C1-12 alkyl; R1 and R3, or R2 and R3 may form a ring) in a mol. The resist composition has a high sensitivity, resolution, dry etching resistance and process adaptability, and is improved in the slimming of a pattern film after development with an aqueous base solution The resist composition is also applicable to the thermal flow process suited for forming a microsize contact hole pattern for the fabrication of VLSI.

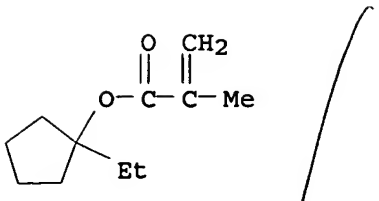
IT **338438-45-2 362478-99-7 362479-00-3D,** ethoxypropyl ether or ethoxyethyl ether **362479-04-7D,** ethoxypropyl ether or ethoxyethyl ether **362479-05-8D,** ethoxypropyl ether or ethoxyethyl ether **362479-06-9D,** ethoxypropyl ether or ethoxyethyl ether **362479-07-0D,** ethoxypropyl ether or ethoxyethyl ether **362479-08-1D,** ethoxypropyl ether or ethoxyethyl ether **362479-12-7 362479-12-7D,** ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. **362479-15-0**
(chemical amplified pos. resist composition containing)

RN 338438-45-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

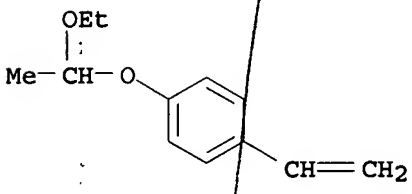
CM 1

CRN 266308-58-1
CMF C11 H18 O2



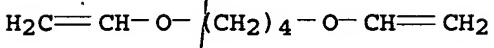
CM 2

CRN 157057-20-0
CMF C12 H16 O2



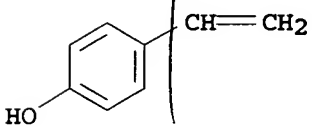
CM 3

CRN 3891-33-6
CMF C8 H14 O2



CM 4

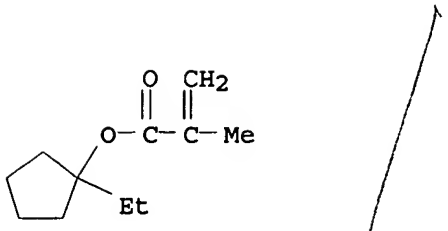
CRN 2628-17-3
CMF C8 H8 O



RN 362478-99-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane and 4-ethenylphenol (9CI) (CA INDEX NAME)

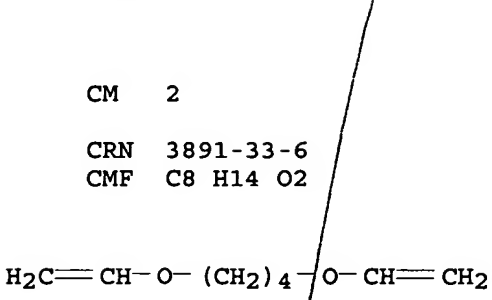
CM 1

CRN 266308-58-1
CMF C11 H18 O2



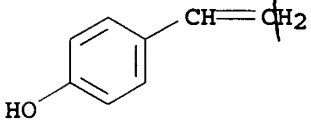
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

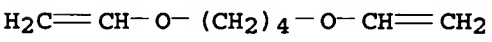
CRN 2628-17-3
CMF C8 H8 O



RN 362479-00-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane (9CI) (CA INDEX NAME)

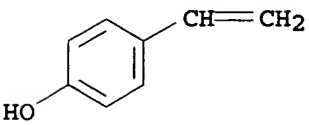
CM 1

CRN 3891-33-6
CMF C8 H14 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

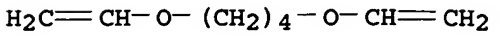


RN 362479-04-7 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and

1,4-bis(2-propenyloxy)butane (9CI) (CA INDEX NAME)

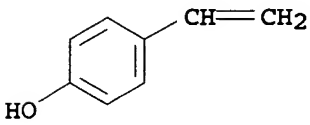
CM 1

CRN 3891-33-6
CMF C8 H14 O2



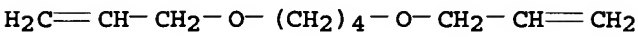
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

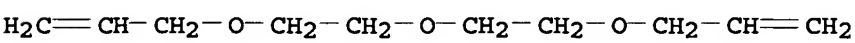
CRN 1471-16-5
CMF C10 H18 O2



RN 362479-05-8 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 3,3'-[oxybis(2,1-ethanediyloxy)]bis[1-propene] (9CI) (CA INDEX NAME)

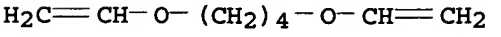
CM 1

CRN 57947-82-7
CMF C10 H18 O3



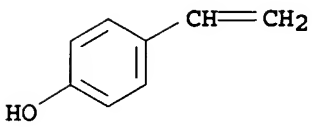
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

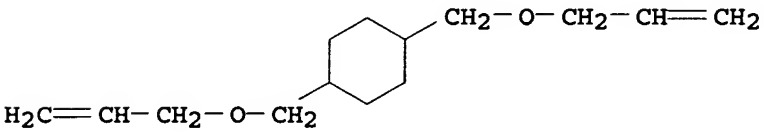
CRN 2628-17-3
CMF C8 H8 O



RN 362479-06-9 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 1,4-bis[(2-propenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

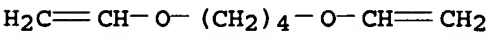
CM 1

CRN 5592-70-1
CMF C14 H24 O2



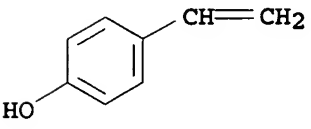
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

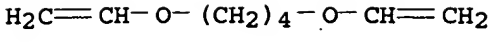
CRN 2628-17-3
CMF C8 H8 O



RN 362479-07-0 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

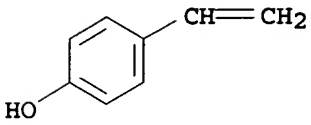
CM 1

CRN 3891-33-6
CMF C8 H14 O2



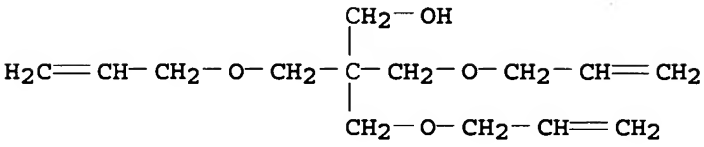
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

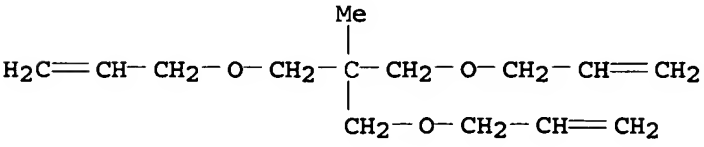
CRN 1471-17-6
CMF C14 H24 O4



RN 362479-08-1 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 3,3'-[[2-methyl-2-[(2-propenyloxy)methyl]-1,3-propanediyl]bis(oxy)]bis[1-propene] (9CI) (CA INDEX NAME)

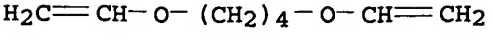
CM 1

CRN 56703-60-7
CMF C14 H24 O3



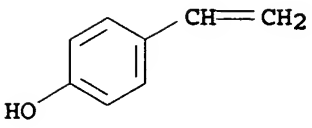
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

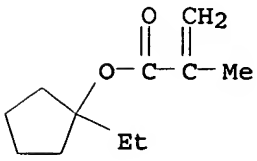
CRN 2628-17-3
CMF C8 H8 O



RN 362479-12-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene, 4-ethenylphenol and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

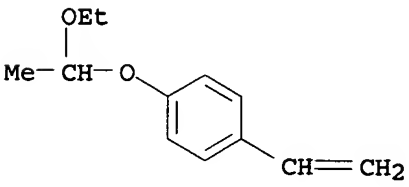
CM 1

CRN 266308-58-1
CMF C11 H18 O2



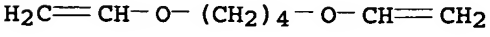
CM 2

CRN 157057-20-0
CMF C12 H16 O2



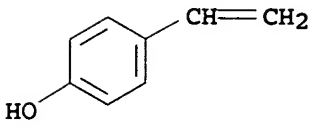
CM 3

CRN 3891-33-6
CMF C8 H14 O2



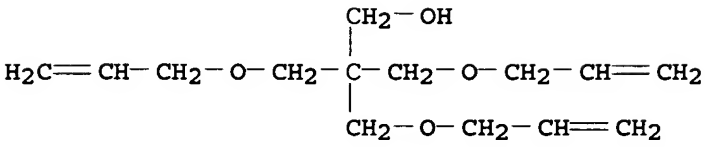
CM 4

CRN 2628-17-3
CMF C8 H8 O



CM 5

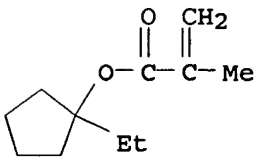
CRN 1471-17-6
CMF C14 H24 O4



RN 362479-12-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene, 4-ethenylphenol and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

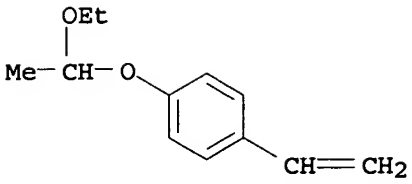
CM 1

CRN 266308-58-1
CMF C11 H18 O2



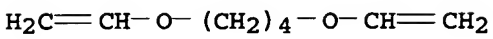
CM 2

CRN 157057-20-0
CMF C12 H16 O2



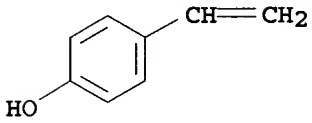
CM 3

CRN 3891-33-6
CMF C8 H14 O2



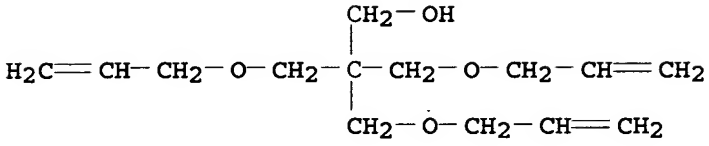
CM 4

CRN 2628-17-3
CMF C8 H8 O



CM 5

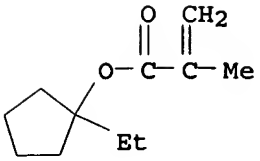
CRN 1471-17-6
CMF C14 H24 O4



RN 362479-15-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 4-ethenylphenol and 3,3'-[[2-methyl-2-[(2-propenyloxy)methyl]-1,3-propanediyl]bis(oxy)]bis[1-propene] (9CI) (CA INDEX NAME)

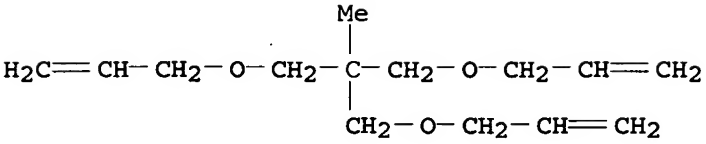
CM 1

CRN 266308-58-1
CMF C11 H18 O2



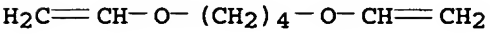
CM 2

CRN 56703-60-7
CMF C14 H24 O3



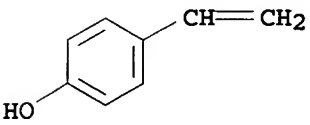
CM 3

CRN 3891-33-6
CMF C8 H14 O2



CM 4

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-039; G03F007-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
IT 3235-51-6, Tris(2-methoxyethyl)amine 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 194996-88-8 326925-52-4 326925-68-2, 1-Ethylcyclopentyl methacrylate-p-hydroxystyrene copolymer 326925-71-7 338438-44-1 **338438-45-2** 362478-92-0D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-93-1D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or

t-butoxycarbonyl Me derivs. 362478-94-2D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-95-3D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-97-5D, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362478-98-6 **362478-99-7 362479-00-3D**, ethoxypropyl ether or ethoxyethyl ether 362479-01-4 362479-02-5 362479-03-6 **362479-04-7D**, ethoxypropyl ether or ethoxyethyl ether **362479-05-8D**, ethoxypropyl ether or ethoxyethyl ether **362479-06-9D**, ethoxypropyl ether or ethoxyethyl ether **362479-07-0D**, ethoxypropyl ether or ethoxyethyl ether **362479-08-1D**, ethoxypropyl ether or ethoxyethyl ether 362479-09-2 362479-10-5 362479-11-6 **362479-12-7 362479-12-7D**, ethoxyethyl ether and/or t-Bu carbonate and/or ethoxypropyl ether and/or t-butoxycarbonyl Me derivs. 362479-14-9 **362479-15-0** 362479-16-1
(chemical amplified pos. resist composition containing)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:615616 HCAPLUS
DOCUMENT NUMBER: 135:172999
TITLE: Positive photoresists containing crosslinked polymers
INVENTOR(S): Adams, Timothy G.; Rajaratnam, Martha M.; Pandya, Ashish A.; Sinta, Roger F.; Varanasi, Pushkara R.; Cornett, Kathleen; Katnani, Ahmad D.
PATENT ASSIGNEE(S): Shipley Company Llc, USA
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1126321	A1	20010822	EP 2001-301054	20010206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002012869	A1	20020131	US 2001-780989	20010209
JP 2002020639	A2	20020123	JP 2001-35110	20010213
PRIORITY APPLN. INFO.:			US 2000-181585P P	20000210

AB The invention provides novel cross-linked polymers and pos. chemical-amplified photoresist compns. that comprise a photoactive

component and such cross-linked polymers. Resists of the invention can exhibit enhanced lithog. results relative to comparable compns. where the polymers are not crosslinked.

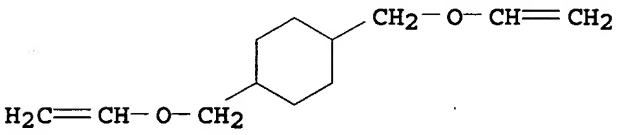
IT **354159-80-1P 354159-81-2P**
(1,4-cyclohexanedimethanol divinyl ether crosslinked; crosslinked polymers in pos. photoresists)

RN 354159-80-1 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

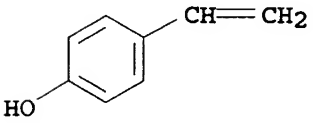
CM 1

CRN 17351-75-6
CMF C12 H20 O2



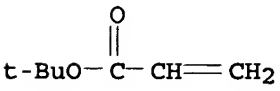
CM 2

CRN 2628-17-3
CMF C8 H8 O



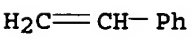
CM 3

CRN 1663-39-4
CMF C7 H12 O2



CM 4

CRN 100-42-5
CMF C8 H8

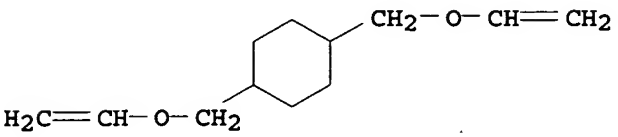


RN 354159-81-2 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 4-ethenylphenol (9CI) (CA INDEX NAME)

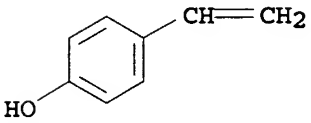
CM 1

CRN 17351-75-6
CMF C12 H20 O2



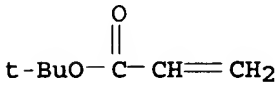
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 1663-39-4
CMF C7 H12 O2



IC ICM G03F007-039
ICS G03F007-004; C08F212-14; C08F008-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **354159-80-1P 354159-81-2P**
(1,4-cyclohexanedimethanol divinyl ether crosslinked; crosslinked polymers in pos. photoresists)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:469366 HCAPLUS
DOCUMENT NUMBER: 135:68557
TITLE: Photolithography and its chemically-amplified photoresists containing specific sulfonyldiazomethane compounds

INVENTOR(S): Seki, Akihiro; Takemura, Katsuya; Osawa, Yoichi; Watanabe, Atsushi; Nagura, Shigehiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001174984	A2	20010629	JP 2000-294695	2000 0927
JP 3750725	B2	20060301		
US 6395446	B1	20020528	US 2000-680481	2000 1005

PRIORITY APPLN. INFO.: JP 1999-285450 A 1999 1006

OTHER SOURCE(S): MARPAT 135:68557

AB The photoresists contain (i) [C6H5-p-q(R1CO2)qR2pSO2]nC:N2(GR3)m (R1, R3 = C1-10 alkyl, C6-14 aryl; R2 = C1-6 alkyl; G = SO2, CO; p = 0-4 integer; q = 1-5 integer; 1 ≤ p + q ≤ 5; n = 1, 2; m = 0, 1; m + n = 2) or (ii) R1CO2-p-C6H4SO2C:N2SO2-p-C6H4OCOR1 (R1 = the same definition as above) as photoacid generators. The photoresists may comprise (α-methyl-)p-hydroxystyrene-(meth)acrylate ester copolymers with Mw 3,000-100,000 containing ≤80 (≠0)-mol% acid-labile substituents. Markush structures for preferable acid-labile substituents are given. Photolithog. employing the photoresists and ≤300-nm high-energy beam or electron beam is also claimed. The photoresists show excellent post-development profiles.

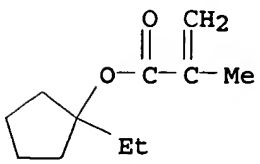
IT **326925-73-9 346428-50-0**
(chemical-amplified pos. photoresists containing alkali-solubility-improved sp. sulfonylazomethanes for far-UV photolithog.)

RN 326925-73-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

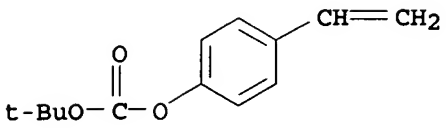
CM 1

CRN 266308-58-1
CMF C11 H18 O2



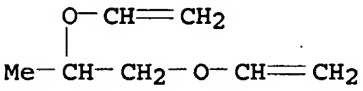
CM 2

CRN 87188-51-0
CMF C13 H16 O3



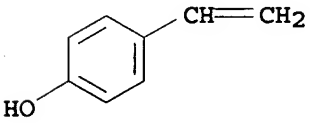
CM 3

CRN 71545-61-4
CMF C7 H12 O2



CM 4

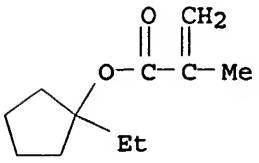
CRN 2628-17-3
CMF C8 H8 O



RN 346428-50-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane, ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

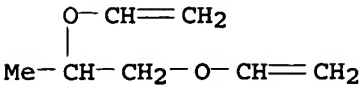
CM 1

CRN 266308-58-1
CMF C11 H18 O2



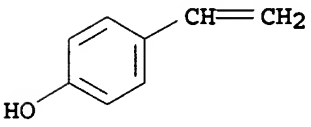
CM 2

CRN 71545-61-4
CMF C7 H12 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O



CM 4

CRN 100-42-5
CMF C8 H8

IC ICM G03F007-004
ICS C07C381-14; C08K005-09; C08K005-13; C08K005-16; C08K005-41; C08K005-43; C08L025-02; C08L025-18; C08L033-02; C08L033-04; C08L035-00; G03F007-039; G03F007-26

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 25, 37

IT 2628-17-3D, p-Hydroxystyrene, ethoxyethyl ether, 1,2-propanediol divinyl ether copolymer 2628-17-3D, p-Hydroxystyrene, ethoxyethyl ether,tert-butoxycabonic ester, 1,2-propanediol divinyl ether copolymer 59269-51-1D, Polyhydroxystyrene, ethoxyethyl ether 155214-68-9D, ethoxyethyl ether 189257-17-8, Poly(hydroxystyrene) acetate 326925-68-2 **326925-73-9** 345580-95-2 **346428-50-0** 346428-52-2
(chemical-amplified pos. photoresists containing alkali-solubility-improved sp. sulfonylazomethanes for far-UV photolithog.)

L66 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:356328 HCAPLUS
DOCUMENT NUMBER: 134:346477
TITLE: Chemically amplified positive resist composition and patterning method
INVENTOR(S): Takemura, Katsuya; Koizumi, Kenji; Kaneko, Tatsushi; Sakurada, Toyohisa
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 53 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1099983	A1	20010516	EP 2000-310001	2000 1110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001142199	A2	20010525	JP 1999-323332	1999 1112
TW 520467	B	20030211	TW 2000-89123870	2000 1110
US 6511785	B1	20030128	US 2000-709629	2000 1113

PRIORITY APPLN. INFO.: JP 1999-323332 A 1999 1112

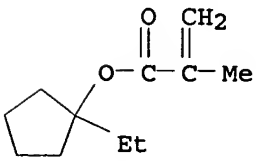
AB The invention relates to a chemical-amplified pos. resist composition for forming a contact hole pattern by the thermal flow process. A method for forming a contact hole pattern using a chemical-amplified pos. resist composition comprising a polymer as the base resin involves the thermal flow step of heat treating the contact hole pattern for further reducing the size of contact holes. A chemical-amplified pos. resist composition comprising a base resin and a compound containing two to six functional groups, specifically alkenyloxy, acetal and ortho-ester groups in the mol. is suitable for forming a contact hole pattern by the thermal flow process. The invention also relates to a method for forming a microsize contact hole pattern in the manufacture of VLSI.

IT **338438-45-2**
(chemical-amplified pos. resist composition comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufacturing and containing)

RN 338438-45-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

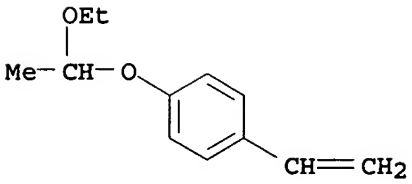
CM 1

CRN 266308-58-1
CMF C11 H18 O2



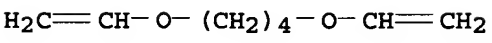
CM 2

CRN 157057-20-0
CMF C12 H16 O2



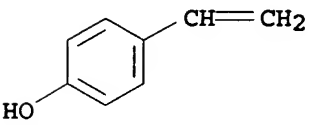
CM 3

CRN 3891-33-6
CMF C8 H14 O2



CM 4

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-70-2D, acetals and esters 147625-42-1D, acetals 150746-92-2 326925-68-2 326925-71-7 338438-44-1 **338438-45-2**
(chemical-amplified pos. resist composition comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufacturing and containing)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

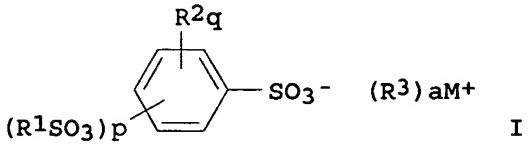
L66 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:133716 HCAPLUS
DOCUMENT NUMBER: 134:200517
TITLE: Novel onium salts as photoacid generators for resist compositions and patterning process
INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Kusaki, Wataru; Watanabe, Satoshi; Nagata, Takeshi;

Nagura, Shigehiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 77 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1077391	A1	20010221	EP 2000-306997	2000 0816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001122850	A2	20010508	JP 2000-245564	2000 0814
US 6440634	B1	20020827	US 2000-637363	2000 0815
TW 536549	B	20030611	TW 2000-89116464	2000 0815

PRIORITY APPLN. INFO.: JP 1999-230122 A 1999 0816
JP 1999-230126 A 1999 0816

OTHER SOURCE(S): MARPAT 134:200517
GI



I

AB Disclosed is a chemical amplification type resist composition that comprises as a photoacid generator novel onium salts of the formula I (R1 = C1-10 alkyl, C6-14 aryl; R2 = H, C1-6 alkyl; p = 1-5, q = 0-4, p+q = 5; R3 = C1-10 alkyl, C6-14 aryl; M = S, I; a = 3 when M=S, 2 when M=I). The chemical amplification type resist comprising the onium salt as a photoacid generator is suited for microfabrication, especially by deep UV lithog. and has many advantages including improved resolution, minimized line width variation or shape degradation even on long-term post-exposure delay, minimized defect after coating, development and stripping, and improved pattern profile after development.
IT **326925-72-8 326925-73-9**
(photoacid generators for photoresist compns. based on sulfonium and iodonium salts and polymers which change their

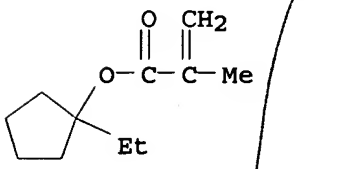
solubility in alkaline developer by acid action)

RN 326925-72-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane and 4-ethenylphenol (9CI) (CA INDEX NAME)

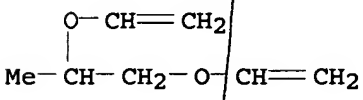
CM 1

CRN 266308-58-1
CMF C11 H18 O2



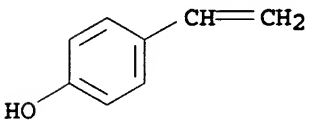
CM 2

CRN 71545-61-4
CMF C7 H12 O2



CM 3

CRN 2628-17-3
CMF C8 H8 O

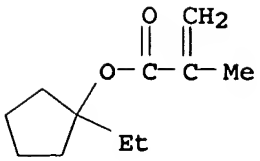


RN 326925-73-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

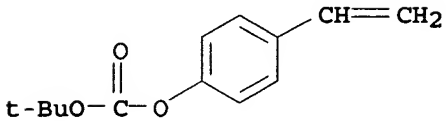
CM 1

CRN 266308-58-1
CMF C11 H18 O2



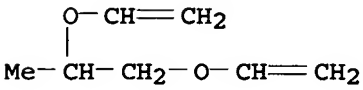
CM 2

CRN 87188-51-0
CMF C13 H16 O3



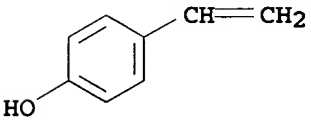
CM 3

CRN 71545-61-4
CMF C7 H12 O2



CM 4

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-004
ICS G03F007-039; C07C381-12; C07C309-73; C07C309-71
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
IT 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether, tert-butoxycarbonate and acetate derivs. 71545-61-4D, reaction products with poly(p-hydroxystyrene) containing ether and ester groups 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-70-6 326925-71-7 **326925-72-8** **326925-73-9**
(photoacid generators for photoresist compns. based on sulfonium and iodonium salts and polymers which change their

solubility in alkaline developer by acid action)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:837042 HCAPLUS
DOCUMENT NUMBER: 134:35025
TITLE: Chemically amplified resist composition containing acid-sensitive resin
INVENTOR(S): Yamana, Shinji
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

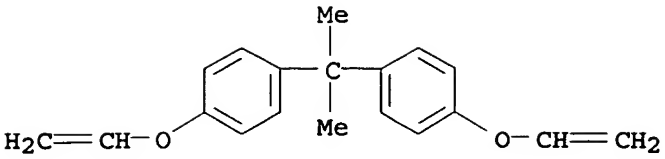
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000330285	A2	20001130	JP 1999-140249	19990520
JP 3285086	B2	20020527		
US 6342334	B1	20020129	US 2000-573009	20000518
US 2002058203	A1	20020516	US 2001-988682	20011120
US 6406831	B2	20020618		

PRIORITY APPLN. INFO.: JP 1999-140249 A 19990520
US 2000-573009 A3 20000518

AB The composition contains a photoacid generator and an acid sensitive resin having a protected carboxy group, wherein the acid generated from the photoacid generator has sulfonyl group and a carboxy group. The composition provides the fine pattern with the excellent pattern profiles.
IT **310882-98-5**
(acid-sensitive resin in chemical amplified resist composition)
RN 310882-98-5 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,1'-(1-methylethylidene)bis[4-(ethenyloxy)benzene] (9CI) (CA INDEX NAME)

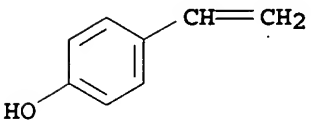
CM 1

CRN 3754-60-7
CMF C19 H20 O2



CM 2

CRN 2628-17-3
CMF C8 H8 O

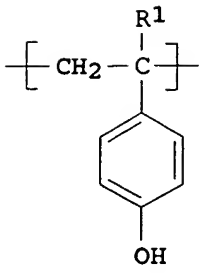


IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
IT 158401-89-9 195458-41-4 **310882-98-5** 310884-69-6
(acid-sensitive resin in chemical amplified resist composition)

L66 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:143365 HCAPLUS
DOCUMENT NUMBER: 132:187654
TITLE: Radiation-sensitive resist composition
INVENTOR(S): Kobayashi, Eiichi; Ikemura, Toshiaki; Nishimura, Yukio; Iwanaga, Shinichiro
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000066404	A2	20000303	JP 1998-258876	1998 0911
PRIORITY APPLN. INFO.:			JP 1998-164700 A	1998 0612

GI



I

AB The radiation-sensitive resist composition contains a radiation-sensitive acid generator and a resin of structure repeating unit I (R1 = H, methyl) and (-CH2-C(R2)(-COOC(CH3)(CH3)-CH2-COCH3)-) (R2 = Me, H). The resist composition shows the excellent sensitivity towards far-UV light and provides the superior resolution

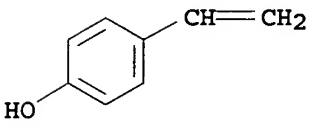
IT **259214-34-1DP**, 1-ethoxyethyl ether
(radiation-sensitive resist composition)

RN 259214-34-1 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethoxyethene and 1,1'-[oxybis(2,1-ethanediyloxy)]bis[ethene] (9CI) (CA INDEX NAME)

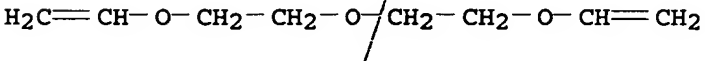
CM 1

CRN 2628-17-3
CMF C8 H8 O



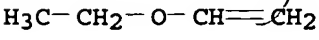
CM 2

CRN 764-99-8
CMF C8 H14 O3



CM 3

CRN 109-92-2
CMF C4 H8 O



IC ICM G03F007-039
ICS H01L021-027

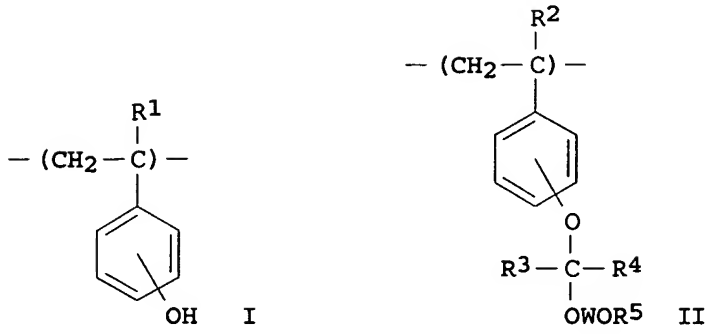
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and

Other Reprographic Processes)
IT 24979-70-2DP, ethoxyalkyl ethers 24979-74-6DP, 1-(cyclohexyloxy)ethyl ether 147625-42-1DP, 1-ethoxyethyl ether 159296-87-4DP, 1-ethoxyethyl ether 259196-63-9P 259196-64-0DP, 1-ethoxyethyl ether 259196-64-0P 259196-65-1P 259196-66-2P 259196-67-3P 259196-68-4P 259196-69-5DP, 1-ethoxypropyl ether 259196-69-5DP, 1-ethoxypropyl ether **259214-34-1DP**, 1-ethoxyethyl ether
(radiation-sensitive resist composition)

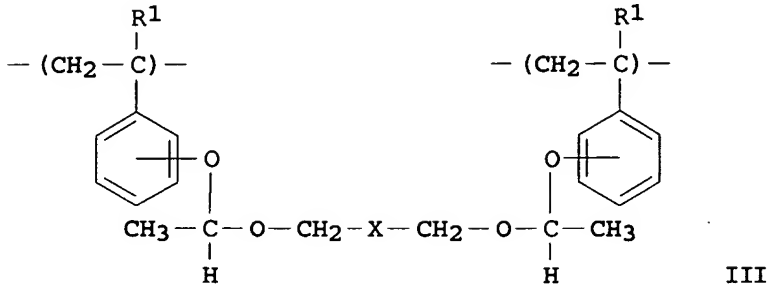
L66 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:143361 HCAPLUS
DOCUMENT NUMBER: 132:187652
TITLE: Positive-working photoresist composition
INVENTOR(S): Fujinomori, Akira; Tan, Shiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000066400	A2	20000303	JP 1998-234339	1998 0820
PRIORITY APPLN. INFO.:			JP 1998-234339	1998 0820

OTHER SOURCE(S): MARPAT 132:187652
GI



I II



III

AB The pos.-working photoresist composition comprises a copolymer having structural units of I-III (R1,2 = H, C1-3 alkyl; R3,4 = H, C1-4 alkyl; R5 = C11-20 alkyl; X, W = divalent organic group), a photoacid, and a solvent. This photoresist composition showed excellent dry-etching resistance.

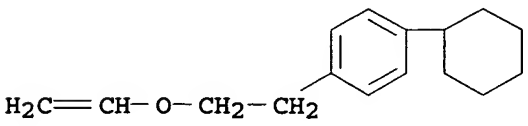
IT **259655-55-5P 259655-56-6P 259655-57-7P 259655-58-8P 259655-59-9P 259655-60-2P 259655-61-3P**
(pos.-working photoresist composition containing)

RN 259655-55-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 1-cyclohexyl-4-[2-(ethenyloxy)ethyl]benzene (9CI) (CA INDEX NAME)

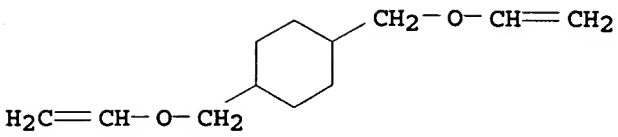
CM 1

CRN 259655-54-4
CMF C16 H22 O



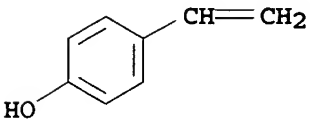
CM 2

CRN 17351-75-6
CMF C12 H20 O2



CM 3

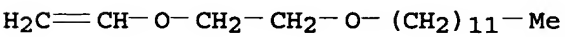
CRN 2628-17-3
CMF C8 H8 O



RN 259655-56-6 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]benzen
e and 1-[2-(ethenyloxy)ethoxy]dodecane (9CI) (CA INDEX NAME)

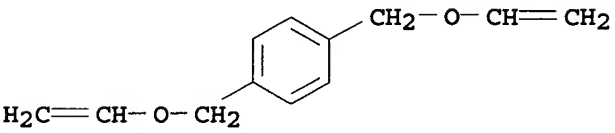
CM 1

CRN 249562-86-5
CMF C16 H32 O2



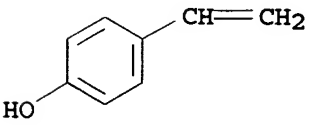
CM 2

CRN 193687-66-0
CMF C12 H14 O2



CM 3

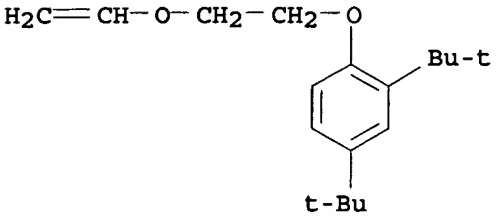
CRN 2628-17-3
CMF C8 H8 O



RN 259655-57-7 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 2,4-bis(1,1-dimethylethyl)-1-[2-(ethenyloxy)ethoxy]benzene and 1,4-bis[(ethenyloxy)methyl]cyclohexane (9CI) (CA INDEX NAME)

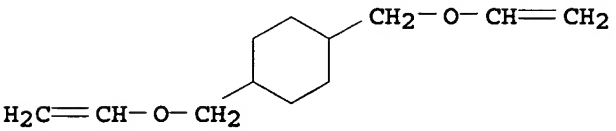
CM 1

CRN 249562-82-1
CMF C18 H28 O2



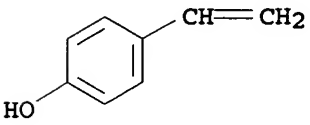
CM 2

CRN 17351-75-6
CMF C12 H20 O2



CM 3

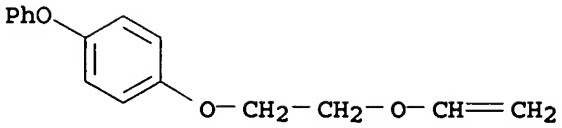
CRN 2628-17-3
CMF C8 H8 O



RN 259655-58-8 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane and 1-[2-(ethenyloxy)ethoxy]-4-phenoxybenzene (9CI) (CA INDEX NAME)

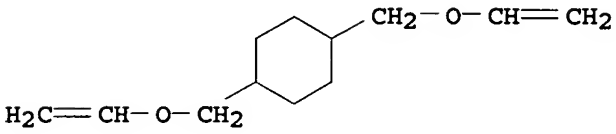
CM 1

CRN 57650-77-8
CMF C16 H16 O3



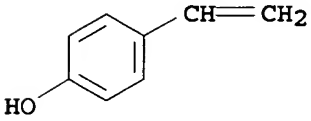
CM 2

CRN 17351-75-6
CMF C12 H20 O2



CM 3

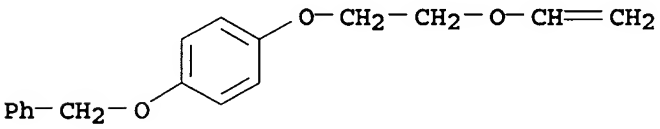
CRN 2628-17-3
CMF C8 H8 O



RN 259655-59-9 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cycloh
exane and 1-[2-(ethenyloxy)ethoxy]-4-(phenylmethoxy)benzene (9CI)
(CA INDEX NAME)

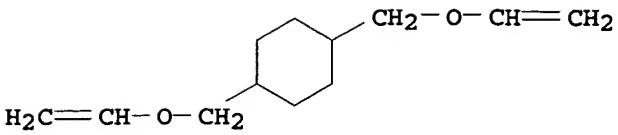
CM 1

CRN 249562-84-3
CMF C17 H18 O3



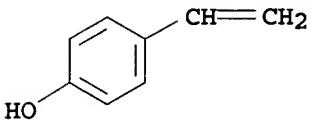
CM 2

CRN 17351-75-6
CMF C12 H20 O2



CM 3

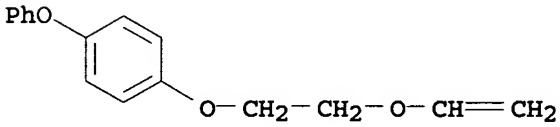
CRN 2628-17-3
CMF C8 H8 O



RN 259655-60-2 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)butane and 1-[2-(ethenyloxy)ethoxy]-4-phenoxybenzene (9CI) (CA INDEX NAME)

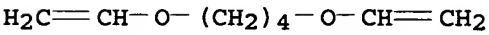
CM 1

CRN 57650-77-8
CMF C16 H16 O3



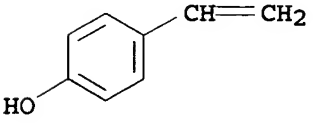
CM 2

CRN 3891-33-6
CMF C8 H14 O2



CM 3

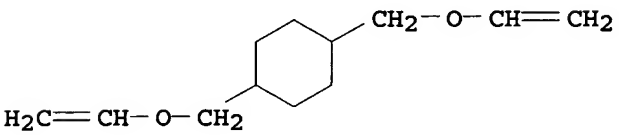
CRN 2628-17-3
CMF C8 H8 O



RN 259655-61-3 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with 1,4-bis[(ethenyloxy)methyl]cycloh
exane and ethoxyethene (9CI) (CA INDEX NAME)

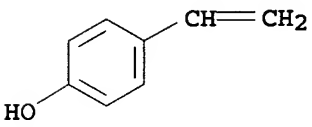
CM 1

CRN 17351-75-6
CMF C12 H20 O2



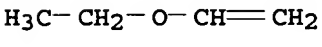
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 109-92-2
CMF C4 H8 O



IC ICM G03F007-039
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 35, 76
IT **259655-55-5P 259655-56-6P 259655-57-7P**
259655-58-8P 259655-59-9P 259655-60-2P
259655-61-3P
(pos.-working photoresist composition containing)

L66 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:117258 HCAPLUS
DOCUMENT NUMBER: 132:173395
TITLE: Radiation-sensitive composition for chemically amplified photoresist
INVENTOR(S): Pawlowski, Georg; Okazaki, Hiroshi; Kinoshita, Yoshiaki; Tsugama, Naoko; Hishida, Aritaka; Ma, Xiao-ming; Yamaguchi, Yuko
PATENT ASSIGNEE(S): Clariant International Ltd., Switz.

SOURCE: PCT Int. Appl., 133 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008525	A1	20000217	WO 1999-JP4304	19990809
W: CN, JP, KR, SG, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1033624	A1	20000906	EP 1999-935116	19990809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6358665	B1	20020319	US 2000-529371	20000703

PRIORITY APPLN. INFO.:
JP 1998-225029 A 19980807
JP 1999-87036 A 19990329
WO 1999-JP4304 W 19990809

AB A chemical amplification-type radiation-sensitive composition comprising a film-forming resin based on a hydroxystyrene in combination with an onium salt precursor capable of generating a fluorinated alkanesulfonic acid as a radiation-sensitive acid-generating agent. This composition is free from the occurrence of corrosion of an apparatus owing to outgassing, the formation of a T-type pattern and the change of line width caused by a delay of processing time, and can be used for achieving a high sensitivity and resolving power and a good and stable pattern formation.

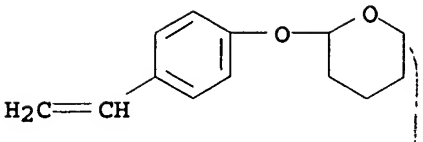
IT **258871-97-5P**, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene-α,ω-triethyleneglycol divinyl ether copolymer
(radiation-sensitive composition for chemical amplified photoresist)

RN 258871-97-5 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 2-(4-ethenylphenoxy)tetrahydro-2H-pyran and 3,6,9,12-tetraoxatetradeca-1,13-diene (9CI) (CA INDEX NAME)

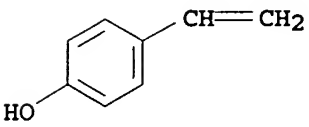
CM 1

CRN 65409-15-6
CMF C13 H16 O2



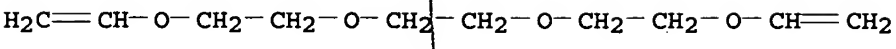
CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

CRN 765-12-8
CMF C10 H18 O4



IC ICM G03F007-004
ICS G03F007-039; G03F007-038; C07C381-12; C07C309-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 76-05-1P, preparation 108-90-7P, Chlorobenzene, preparation 109-92-2DP, Ethylvinyl ether, reaction product with functionalized styrene polymer 110-75-8DP, 2-Chloroethylvinyl ether, reaction product with 4-hydroxystyrene homopolymer 536-80-1P, Iodosylbenzene 827-52-1P, Cyclohexylbenzene 2628-17-3P 5292-43-3DP, tert-Butylbromoacetate, reaction product with hydrolyzed 4-tert-Bu polymer 7758-05-6P, Potassium iodate 12124-97-9P, Ammonium bromide 18995-35-2P 24979-70-2DP, 4-Hydroxystyrene homopolymer, reaction product with functionalized vinyl compound 34619-03-9DP, Di-tert-butylcarbonate, reaction product with 4-hydroxystyrene homopolymer 68734-62-3P, Trimethylsilylnonafluorobutanesulfonate 94287-61-3P 129361-29-1P 130100-38-8P 133685-94-6P 135648-85-0P, 4-Hydroxystyrene-4-methoxystyrene copolymer 144317-44-2P, Triphenylsulfonium nonafluorobutanesulfonate 155040-27-0P, 4-Hydroxystyrene-tert-butyl methacrylate copolymer 158401-89-9P 174476-25-6DP, 4-Acetoxystyrene-4-tert-butyl acrylate copolymer, hydrolyzed, reaction products with Et vinyl ether 175610-67-0P 176747-00-5P, Diphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 204065-67-8DP, 4-Hydroxystyrene-4-methylstyrene copolymer, reaction product with ethoxy vinyl ether 241806-75-7P, Tris(4-tert-butylphenyl)sulfonium nonafluorobutanesulfonate 258871-76-0P, Tris(4-tert-butylphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-78-2P, Tri(4-t-butoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-81-7P, Tris(4-tert-

butoxycarbonylmethoxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-83-9P, β-Oxocyclohexyl 2-norbonylmethyl sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-84-0P, Bis(4-cyclohexylphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-85-1P, 4-Methylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-86-2P, Bis(4-tert-butoxyphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-88-4P, Bis(4-methylphenyl)-4-cyclohexylphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-89-5P, Tris(4-chlorophenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-90-8P, 4-Hydroxy-3,5-dimethylphenyldiphenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-91-9P, Di(4-t-butyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-94-2P, Di(4-tert-butylcarbonyloxymethyloxyphenyl)iodonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258871-95-3P, 4-tert-Butylphenylphenyliodonium 3,3,3,2,1,1-hexafluoropropanesulfonate **258871-97-5P**, 4-Hydroxystyrene-4-tetrahydropyranyloxystyrene-α,ω-triethyleneglycol divinyl ether copolymer 258871-99-7P, Tris(tert-butylcarbonylmethyloxyphenyl)sulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-01-4P, Bis(4-cyclohexylphenyl)phenylsulfonium 3,3,3,2,1,1-hexafluoropropanesulfonate 258872-02-5P, 4-Hydroxystyrene-4-tert-butyloxycarbonyloxystyrene-tert-butyl methacrylate copolymer 258872-05-8P, Diphenyl 4-tert-butylphenylsufonium nonafluorobutanesulfonate 258872-08-1P, Tris(4-butoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-10-5P, Tris(4-tert-butoxycarbonylmethoxyphenyl)sulfonium nonafluorobutanesulfonate 258872-13-8P 258872-14-9P, Bis(4-cyclohexylphenyl)iodonium nonafluorobutylsulfonate 258872-15-0DP, 4-Acetoxystyrene-styrene-tert-butyl methacrylate copolymer, reaction products with hydroxystyrene polymer derivative 258873-04-0P, Bis(4-hydroxyphenyliodonium) 3,3,3,2,1,1-hexafluoropropanesulfonate

(radiation-sensitive composition for chemical amplified photoresist)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:154674 HCAPLUS
DOCUMENT NUMBER: 126:164302
TITLE: Manufacture of waterless presensitized lithographic plate showing high sensitivity
INVENTOR(S): Tsucha, Mitsumasa; Sato, Hironori; Kondo, Shunichi
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08328240	A2	19961213	JP 1995-132034	

1995
0530

PRIORITY APPLN. INFO.: JP 1995-132034

1995
0530

AB The plate includes a photosensitive layer and a silicone rubber layer successively laminated on a support, where the photosensitive layer is prepared by applying a coating solution containing (A) a compound having ≥2 enol (thio)ethers of R1(R2)C:C(R3)O or R1(R2)C:C(R3)S (R1-3 = H, alkyl, aryl), (B) a linear macromol. compound having an acid group and OH or SH, and (C) a photoacid generator decomposing with active-beam irradiation or radiation, and heating at 60-150° for 30 s-10 min.

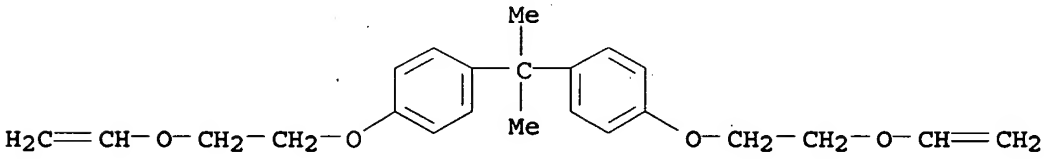
IT **160508-71-4P**
(photosensitive layer; manufacture of waterless presensitized lithog. plate containing enol ether-crosslinked photoresist layer)

RN 160508-71-4 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylmethylbenzene and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8
CMF C23 H28 O4



CM 2

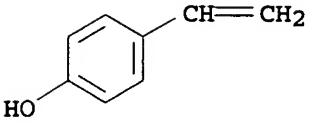
CRN 25013-15-4
CMF C9 H10
CCI IDS

D1—Me

D1—CH═CH2

CM 3

CRN 2628-17-3
CMF C8 H8 O



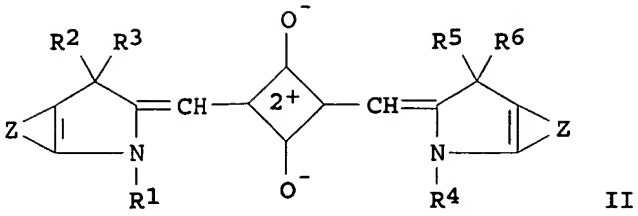
IC ICM G03F007-00
ICS G03F007-039
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 52411-04-8DP, polymers with polyvinyl butyrals, vinyl alc., and vinyl phthalate 160508-63-4P 160508-65-6P 160508-67-8P
160508-71-4P 186819-13-6P 186819-14-7P 186819-15-8P
186819-16-9P 186819-17-0P 186819-18-1P 186819-20-5P
(photosensitive layer; manufacture of waterless presensitized lithog. plate containing enol ether-crosslinked photoresist layer)

L66 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:67471 HCAPLUS
DOCUMENT NUMBER: 124:216089
TITLE: Visible light-reactive resin composition and sheet-type optical recording material
INVENTOR(S): Hosoda, Yukio; Myata, Tadakazu
PATENT ASSIGNEE(S): Shinoji Seishi Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 123 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

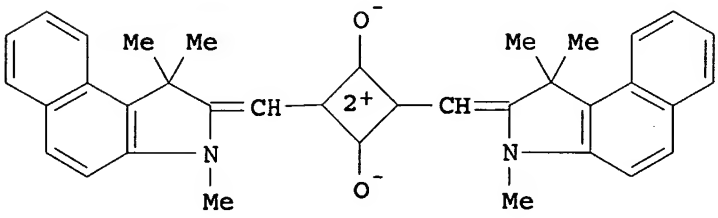
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07287393	A2	19951031	JP 1994-76911	19940415

PRIORITY APPLN. INFO.: JP 1994-76911 19940415

GI



II



III

AB The title resin composition contains (a) ≥1 selected from (co)polymers with weight average mol. weight (Mw) ≥4000 of p-vinylphenol, (b) ≥1 cation-reactive compound selected from vinyl ether and amide compds., (c) 2,4,6-tris(trichloromethyl)-1,3,5-triazine (I), and (d) a squarylium salt-type sensitizer II [R1-6 = saturated or unsatd. hydrocarbon group; Z = hydrocarbon group which is condensed with the pyrrole ring to form an aromatic cyclic structure]. The optical material comprises a sheet substrate coated with a photosensitive layer containing the composition and a binder. The composition reacts quickly by irradiation with visible semiconductor laser beams to form images. Thus, a photosensitive resin composition comprised Maruka Lyncur M-S 3 [poly(p-vinylphenol); Mw 8300], n-butylo ether, Cymel 300, I, and NK-3380 (III).

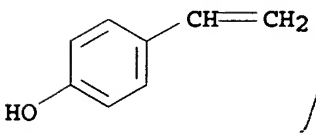
IT **174459-19-9**
(visible light-reactive resin composition and recording material using it)

RN 174459-19-9 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with 1,4-bis(ethenyloxy)cyclohexane (9CI) (CA INDEX NAME)

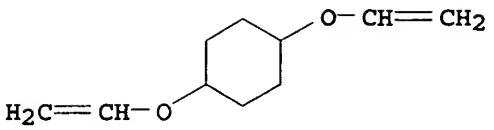
CM 1

CRN 2628-17-3
CMF C8 H8 O



CM 2

CRN 706-13-8
CMF C10 H16 O2



IC ICM G03F007-031
ICS G03F007-027; G03F007-038
ICA G03F007-004
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 91277-21-3 **174459-19-9** 174459-20-2
(visible light-reactive resin composition and recording material using it)

L66 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:315625 HCAPLUS
DOCUMENT NUMBER: 122:326513
TITLE: Positive-working light-sensitive composition.
INVENTOR(S): Kondo, Syunichi; Umehara, Akira; Aotani, Yoshimasa; Yamaoka, Tsuguo
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 65 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 609684	A1	19940810	EP 1994-100530	1994 0114
EP 609684 R: DE, GB	B1	20000405		
JP 06230574	A2	19940819	JP 1993-18793	1993 0205
US 5939235	A	19990817	US 1997-968210	1997 1112

PRIORITY APPLN. INFO.:

JP 1993-18793	A	1993 0205
US 1994-176257	A1	1994 0103
US 1995-545370	A1	1995 1019

OTHER SOURCE(S): MARPAT 122:326513
AB A pos.-working light-sensitive composition comprising (a) a compound having ≥2 enol ether groups, represented by the following general formula (R2)(R1)C:C(R3)-O- wherein R1, R2 and R3 may be

the same or different and each represents a H atom, an alkyl group or an aryl group, provided that each 2 of R1, R2 and R3 may be linked together to form a saturated or olefinically unsatd. ring. (b) a linear polymer having acidic groups; and (c) a compound capable of generating an acid through irradiation with actinic light rays or radiant rays, the component (a) and the component (b) being thermally crosslinked. The pos.-working light-sensitive composition has high light-sensitivity and permits the use of light rays extending over a wide range of wavelengths. Therefore, the pos.-working light-sensitive composition can provide clear pos. images and has a wide development latitude.

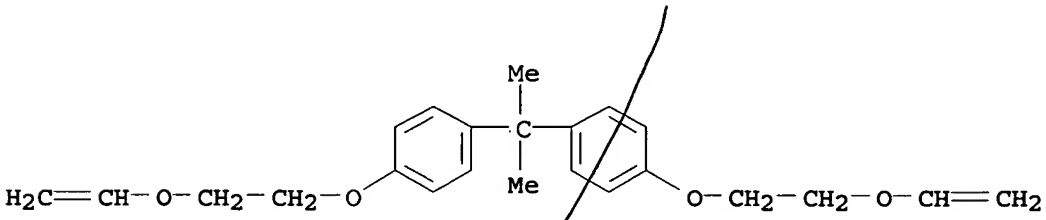
IT **160508-71-4**
(crosslinked; pos.-working photoimaging composition)

RN 160508-71-4 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylmethylbenzene and 1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 52411-04-8
CMF C23 H28 O4



CM 2

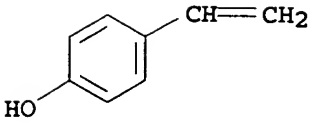
CRN 25013-15-4
CMF C9 H10
CCI IDS

D1—Me

D1—CH═CH$_2$

CM 3

CRN 2628-17-3
CMF C8 H8 O



IC ICM G03F007-039
ICS G03F007-004
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 160508-63-4 160508-64-5 160508-65-6 160508-66-7
160508-67-8 160508-68-9 160508-69-0 **160508-71-4**
160508-72-5 160508-73-6 160508-74-7 160508-75-8
160508-76-9 160508-77-0 160508-78-1 160508-79-2
160508-80-5 160508-81-6 160508-82-7 160508-83-8
160508-84-9
(crosslinked; pos.-working photoimaging composition)